

# Copyright

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This product uses MAGIX patent pending technology.

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# Preface

Congratulations! You have just purchased a lavishly equipped and easy-to-use video studio including video functions for recording, editing, subtitling, dubbing, mixing, transitioning, effects editing, optimizing, reverse transferring, and burning CD-ROMs, (S) Video CDs, and DVDs / Blu-ray Discs™

The possibilities are endless: from quickly editing your holiday videos to composing elaborate multimedia masterpieces. For example:

- DVD [movie](#) memories of vacations, parties, sports, or special family events
- Video web pages
- CD or DVD movies and slideshows
- Web movies, email greetings, or streaming movies
- Enhanced presentations, instructional courses
- Ad spots or TV trailers
- Music videos, karaoke shows, animation, fun clips

The printed manual only contains the basic functions of both program versions MAGIX Movie Edit Pro 16 and MAGIX Movie Edit Pro 16 Plus. Additional features of the Plus version are marked accordingly.

In addition to the printed manual, there is also a more detailed documentation which is copied to your hard drive during installation. This electronic PDF manual describes all program functions and even gives you an overview of everything that is relevant for the different disc formats such as CDs, VCDs, SVCDs and DVDs.

This information will get you started on your way to making your first movie masterpiece. The reference chapter that follows and the index can also be used to help quickly when you need it.

Enjoy!

The MAGIX Team

# Support

If you experience any problems with your [software](#), please contact our support team:

Support website: <http://support.magix.net/contact/us>

This website takes you to the MAGIX user service page; the following free offers are also featured there:

- **FAQs** (frequently asked questions) and general tricks and tips. In most cases, you'll find the solution to your problem here. If not, use the email support form.
- **Email support form**: Use the special form to inform our support staff about your system. This information is used to solve your problems quickly and competently. Simply fill it out and send it with a mouse click!
- **Support forum**: You are not alone. Perhaps other users had a similar problem and can help you solve yours. Our support staff are also regular contributors.
- **Download section**: Updates, improvements, and patches are likewise offered free of charge via download. Many problems you may experience are already familiar to us, and they can often be solved by downloading the latest patch. Besides patches, there are also wizards for checking and optimizing your system.
- **Links**: The links list contains the contact addresses for all of the most important [hardware](#) manufacturers.

## **Please note:**

To be able to use the support, you have to register your product using the serial number provided. This number can be found on the CD case of your installation CD or on the inside of the DVD box.

## **You can also reach our support team by telephone:**

**UK:** 0203 3183666 (Mon. - Fri., 09:00-16:00 GMT)

**USA/Canada:** 1-775-562-0527 (Mon.-Fri. 9 am to 5 pm EST)

**Denmark:** 699 18763 (Mon.- Fri. 10:00 - 17:00)

**Finland (Suomi):** 09 42419023 (Mon.- Fri. 11:00 - 18:00)

**Norway:** 210 35843 (Mon.- Fri. 10:00 - 17:00)

**Sweden:** 0852500713 (Mon.- Fri. 10:00 - 17:00)

You can request a free access code to the phone support hotline by using this link:

<http://support.magix.net/phone>

. There you'll also get additional information and explanations about phone support.

## **Please have the following information at hand:**

- Program version
- Configuration details (operating system, processor, memory, hard drive, etc.), sound card configuration (type, driver)
- Information regarding other [audio](#) software installed

## **You can also contact our support team by mail:**

UK/Scandinavia: MAGIX Development Support, P.O. Box 20 09 14, 01194 Dresden, Germany

US/Canada: MAGIX Customer Service, 1105 Terminal Way #302, Reno, NV 89502, USA

## **Customer service & upgrades (US only)**

Periodically, MAGIX offers users who purchased their software an upgrade from a previous product to the current version. For details about an upgrade, please call us using the following number:

Sales Department 1-305-722-5810

Monday to Friday 9am ? 5pm (EST)



# Serial number

A serial number is included with each product, and although it is not required for the installation of the [software](#)

, it does enable access to additional bonus services. Please store this number in a safe place.

## **What can a serial number do?**

A serial number ensures that your copy of MAGIX [Movie](#)

Edit Pro 16 is clearly assigned to you and only you, and it makes improved and more targeted customer service possible. Abuse of the software can be prevented with a serial number, since it ensures that the optimum price/performance ratio continues to be offered by MAGIX.

## **Where can the serial number be found?**

The serial number can be found on the reverse side of your CD/DVD case. If your product, for example, is packed in a DVD box, then you'll find the serial number on the inside.

For versions that have been especially optimized for the Internet (download versions), you'll receive your serial number for activating the software directly after purchasing the product via email.

## **When will you need the serial number?**

The serial number is required when you start or register MAGIX Movie Edit Pro 16 for the first time.

**Note:** We explicitly recommend registering your product, since only then are you entitled to get program updates and contact [MAGIX Support](#). Entering the serial number is also required for [activating codecs](#)

# System requirements

For Microsoft® Windows® XP™ / Vista™ / 7™

- Intel® Pentium® IV or AMD® Athlon™, 2 GHz or higher
- 1 GB RAM
- 1 GB free [hard disk](#) memory and a DVD drive for program installation
- Graphics card with a screen resolution of at least 1024 x 768
- Sound card (multi-channel sound card recommended for surround sound editing)

## Minimum requirements for HD editing

- Intel® Pentium™ IV 3 GHz with hyperthreading, or dual core with at least 1.3 GHz
- 2 GB RAM
- DirectX® 9.0c [compatible](#) graphics card, min. 128 MB graphics card memory, and Pixelshader 2.0, ATI X300 or higher, NVIDIA GeForce 6600 or better

## Recommended configuration for [AVCHD](#) editing

- Intel® Core™ 2 Quad with 2.83 GHz
- 3 GB RAM
- ATI Radeon HD 3000 series or higher with 512 MB VRAM

# MAGIX Online World

MAGIX Online World from MAGIX offers you a range of new services for your photos, videos, and music that are accessible directly from the "Online" [menu](#) in MAGIX [Movie](#)

Edit Pro 16:

In this chapter

[MAGIX Online Album](#)

[MAGIX Blog Service](#)

[MAGIX Website Maker](#)

[MAGIX Online Print Service](#)

[Catooh – the Online Content Library](#)

## MAGIX Online Album

MAGIX Online Album is your personal multimedia album on the Internet. If you want to present slideshows or videos online, then MAGIX Online Album is the perfect service.

## MAGIX Blog Service

With MAGIX Blog Service, YOU make the news! Share your thoughts, experiences, and news with a worldwide audience in no time using your own interactive online multimedia journal. Invite family, friends, and acquaintances to join in and enter their comments! A free MAGIX Online Album belongs to the MAGIX Blog Service so that you always have full control over your contributions.

[You can also read the FAQ \(frequently asked questions\) on the Internet.](#)

## MAGIX Website Maker

MAGIX Website Maker helps you create a personal Internet showcase with a professional design in just a few mouse clicks ? without prior knowledge, including your own chosen [domain](#) and email address. Publish slideshows and videos and accessorize your site with music and various effects ? anything from a simple business card to a fireworks display of effects, professional or private ? show your best side!

More about this topic can be found under [MAGIX Website Maker](#).

## MAGIX Online Print Service

MAGIX Online Print Service is perfect for getting your pictures processed online or printed as photo gifts on mugs, t-shirts, or calendars.

## Catooh – the Online Content Library

If your [project](#)

is missing pictures, videos, DVD menus, sounds, or samples, then you should have a look at the huge selection available at Catooh. There you'll be able to buy media in excellent quality for low prices: DVD menus, Slideshow Maker styles, decorative elements, 3D power effects, 3D transition series, MAGIX Soundpools, songs, ringtones... Perfectly suited to all MAGIX photo, video, and music projects.

# Introduction

In this chapter

[What is MAGIX Movie Edit Pro 16?](#)

[What is MAGIX Movie Edit Pro 16?](#)

[What's new in MAGIX Movie Edit Pro 16?](#)

[Features](#)

[Extra in the Plus version](#)

# What is MAGIX Movie Edit Pro 16?

MAGIX [Movie](#) Edit Pro 16 is a complete movie studio for your PC. MAGIX Movie Edit Pro 16 lets you easily transmit your recordings to your computer and then, once you have improved and enriched them, onto DVD and Blu-ray Disc™

. It's great for theater-quality presentations on TV, screen, or monitor.

MAGIX Movie Edit Pro 16 is a production studio for the PC for editing videos, movies, photos, and [audio](#)

from a wide range of sources. Long movies can be automatically separated into different chapters or scenes, or do the opposite by automatically incorporating short takes into a single movie.

Add music, theater-quality transitions, text, and selected effects to your own movies with a mouse click.

The easy-to-use interface, advanced technology and handy assistants guarantee perfect results at lightning speed!

Once your movie is finished, you can use it again in a number of ways: Transfer it back onto tape or to your camcorder, burn it onto DVD or Blu-ray Disc™

and enjoy it on TV, or put it online for your friends and family in your personal MAGIX Online Album.

# What's new in MAGIX Movie Edit Pro 16?

## Improved file import

MAGIX [Movie](#) Edit Pro 16's support of [video formats](#) has been improved, and new formats have been added.

- For DVD videos, multiple [audio](#) tracks, or the corresponding [audio track](#) may be selected.
- OGG and [MP3](#) are now read directly; conversion to the [WAV](#) format is omitted. To import DVDs with multiple audio tracks (e.g. multi-lingual videos), the corresponding audio track can be selected via the [context menu](#) for the respective [audio](#) object.

## **Creating backgrounds**

The [Media Pool](#)

features useful templates for various applications. For example, there are professional backgrounds for measurements, but there are also special templates with more creative freedom and adjustable color schemes.

## **Performance test for your PC during AVCHD import**

A performance test has been integrated into MAGIX [Movie Edit Pro 16](#) for loading [AVCHD](#) videos. This tests whether your computer is powerful enough to edit [AVCHD](#) material directly.

## Revised MAGIX Slideshow Maker

### [MAGIX Slideshow Maker](#)

has been completely revised. Effects and fades can now be set and adjusted in detail. This program is accessible via "Edit -> Wizards -> Slideshow Maker".

## Secondary color correction

[Secondary color correction](#) allows the colors in an area of an [image](#) to be edited independently from the rest of the image. To do this, the image is separated into fore and background segments. For each layer, a color range can be selected and edited with the eyedropper tool. Color correction can be found in the Media Pool under "Video effects -> Color correction".

## Object zoom

Activate this mode and click on an object to zoom in for detailed editing. This allows individual drum hits in a loop to be edited in a very detailed way or cut. Select the object and then you will see a [button](#) with four arrows pointing outwards on it in the lower right section of the Arranger. Click this [button](#) again to reset the view to the original settings.

## Scrubbing

[Scrubbing](#) originates from the time of tape machines and provides quicker monitoring of passages of a film or piece of music. This was technically implemented in these devices by keeping the tape head on the tape itself, but the motor doesn't drive the tape rolls in this case. Instead the tape is "manually" set to the desired position. Scrubbing in MAGIX [Movie](#)

Edit Pro 16 is available beneath the transport controls via a large wheel, which may be used to move the playback marker.

## Audio effects animation in the Media Pool

[Audio](#) effects can also be animated in the Media Pool in the same way as video effects. Automation curves that were normally difficult to draw can now be set and changes be made with just few keyframes. Because these curves are object-related, the entire arrangement remains clearly laid-out even with complex automations. The [button](#) for animations is located in the Media Pool (like video effects).

## Improved video upload

### [Video uploads to video portals and communities](#)

can now even be done in HD quality, and in most cases, without recalculation on the video portal or community website. Upload functions are accessible via "File -> Internet".

## Revised DVD menu design

The DVD [menu](#) design function has been generally revised. You can access this option directly via the "Bum" [button](#)

## New Title Editor

Titles, text, opening and end credits are now written directly in the preview monitor so that you can see exactly where your titles will be positioned right away. Click the "Title" [button](#) in the Media Pool, select a template and place it onto the track via [drag & drop](#). You may now edit your titles in the preview window.



## **Additional innovations in the PLUS and Premium versions**

Additional innovations in the PLUS and Premium versions versus the classic version:

- Secondary color correction for impressive color effects
- Level display for [audio](#) file import
- Extended jump markers for improved [project](#) navigation
- Creation of colored surfaces/color scroll generator
- Upload videos to Vimeo
- Travel route animation
- MAGIX Music Editor with optimized user guidance
- Advanced support for Blu-ray and [AVCHD](#) discs
- More functions for DVD [menu](#) design
- Timeline zoom for individual objects
- Internal PC performance benchmarking for optimized presets

## **Additional innovations in the Premium version**

- **proDAD Mercalli Expert**: The ultimate solution for stabilizing video clips retroactively
- **proDAD Adorage HD SE**: Video effects and transitions in HD quality
- **XXL sound pack**: Features over 500 sounds and complete songs

# Features

## Recording

MAGIX [Movie](#)

Edit Pro 16 provides the following recording options:

- **DV cameras:** Mini DV camcorders or DV video recorders
- **HDV cameras:** HDV1 and HDV2 camcorders
- **Video:** Analog TV, video input, VHS recorders, webcams
- **Single [frame](#):** Single images and series of images from webcams, video recorders, video cameras, or TV cards
- **[Audio](#):** Microphones, cassette recorders, MiniDisc players, turntables
- **Screen (Plus version only):** PC monitor.

Analog capture requires capture cards [compatible](#)

with DirectShow. DV capture can be performed through an OHCI-compatible IEEE 1394 host adapter (Firewire or iLink). A TV card can be used to record programs from TV or from your video recorder.

## Import/Export formats

**Video files:** Videos for Windows and DV-[AVI](#) type 1/2 (\*.avi), [MPEG-1](#) and 2 (\*.mpg, \*.mp2, \*.MPEG), QuickTime (\*.[mov](#)), MAGIX Video (\*.[mxv](#)), Windows Media, VOB streams from DVD (unencrypted), [AVCHD](#) (import only, only in the Plus version), MPEG-4 (\*.mp4) (after fee-based activation). Activation is free in the Plus version.

**Note:** To import and export AVC and MPEG-4 files, the MPEG-4 codec must first be [activated](#). A [dialog](#) will open if the codec is required. Files with a horizontal resolution of more than 768 pixels can only be loaded in MAGIX [Movie](#)

Edit Pro 16 Plus.

**[Audio](#) files:** The following formats are supported for soundtracks. [Wave](#), [MP3](#) (Windows Media Player 10 is required for export), [WMA](#), [OGG Vorbis](#), [MIDI](#) files, and audio CD tracks.

**Graphics files (for slideshows or as a still behind a scrolling title):** Windows bitmaps (BMP), JPEG, GIF, Animated GIF, ZSoft Paintbrush (PCX), PNG, Portable Pixmap (PPM), Portable Greymap (PGM), Adobe Photoshop (PSD), Sun Rasterfile, Targa (TGA), Tagged [Image](#) File Format (TIFF), Photo CD (PCD).

### Text files in RTF format

: You may conveniently enter text like closing credits into any text editor and then save it in the universal text format (.rtf). Loading such text into MAGIX Movie Edit Pro 16 creates a title object.

### Note

:

AVI video files in DivX™ format can only be imported with the corresponding codec installed! The DivX codec can be downloaded from [www.divx.com](#).

The QuickTime Library has to be installed to import QuickTime files (\*.mov).

Additional export formats: In addition to the above-mentioned audio and video formats, the following formats can also be exported: RealMedia™, BMP, Snapshot function (export any film motif as a bitmap or JPEG file). In addition, MAGIX Online Album can be used to create a Flash video. The video to be uploaded to the MAGIX Online Album will be exported in Windows Media format, and from there it can be exported as a Flash video.

You can read more information about importing and exporting files in the "[Media Pool](#)

" chapter.

## **AVCHD standard support**

Files from [AVCHD](#) cameras can be either read directly or imported. Newer computers are capable of decoding and playing this format in real-time.

MAGIX [Movie](#) Edit Pro 16 does a performance check in order to make sure that the computer has enough computing capacity. If the check indicates that the computer is insufficient, AVCHD material is transformed into a [MPEG](#)

-2 file to allow older systems to edit it, too.

**Note:** To import AVCHD video, the camera drive must be installed even if you are working with portable media (8 cm DVDs, SD memory card, etc.). Reason: [AVCHD](#) cameras use an improved UDF file system which Windows can't handle without the driver.

## **AVCHD Lite**

MAGIX [Movie](#) Edit Pro 16 now also supports the [AVCHD](#)

Lite standard, which is used by digital cameras for recording video (among other things).

## **AVCHD activation details**

**Attention:** For [AVCHD](#) support, Dolby Digital Stereo and the MPEG-4 codec must be activated. To convert AVCHD videos to [MPEG](#)

-2, the MPEG-2 codec must be activated.

## **Burnable disc formats**

- 1:1 copies of DVDs & (S)VCDs
- Double-layer DVDs
- VCDs ([MPEG-1](#) on CD-R)
- S-VCDs (MPEG-2 on CD-R)
- DVD (MPEG-2 on DVD)
- miniDVDs (MPEG-2 on CD-R)
- Blu-ray Discs
- [AVCHD](#) disc to DVD and Blu-ray
- [Project](#) backups and backup copies

## **Automatic scene recognition**

Long films are automatically divided into shorter scenes upon import or even retroactively.

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## Timeline mode / Storyboard mode / Overview mode

MAGIX [Movie](#)

Edit Pro 16 provides three specialized views for especially easy editing:

- All scenes from your film are listed sequentially in [Storyboard mode](#). Every [scene](#) is displayed with a preview picture in the storyboard.
- **Timeline mode** chronologically displays your photos with text and sound elements over four tracks: The longer the representative object remains in the track, the longer the corresponding photo will be displayed during playback. In total you have four tracks to arrange your scenes with titles, movie sequences, or music.
- **Overview mode** displays all scenes in multiple rows. The zoom function makes sure that the number of scenes you want to view can be viewed at the same time.
- The Plus version also features [Multicam mode](#), which can be switched on in Timeline mode. This mode allows you to edit together two camera perspectives comfortably.

## Optimize Video/Audio

Every film and every video can be optimized for [image](#) quality, color improvement (RGB, saturation), sharpness (sharp and soft filters), brightness control (brightness, contrast) and pushed through an anti-flicker filter (Deinterlace). The sound quality of every [movie](#) and every video can also be optimized. The equalizer allows you to manipulate the frequency spectrum ? perfect for cleaning up muffled [dialog](#) . The compressor is a dynamic volume control that can lend the overall sound a deeper, richer quality. The stereo effects processor justifies the position of the sound in the stereo panorama, while the DeNoiser and DeHisser are professional noise reduction tools which perform the function indicated by their names.

## Effects

MAGIX [Movie](#)

Edit Pro 16 offers numerous effects and effects settings options as described in detail in the chapter "Effects and titles". A short overview:

- Every object (every video, every single [scene](#), every photo, and every [audio](#) recording) can be provided with its own individual effects combination. Every effects combination can be saved separately so that you can use it later on different objects. Right click the object and choose the "Save video effects" option in the [context menu](#).
- Video effects are selected and set up in the "Effects" folder in the Media Pool. Most effects allow "keyframes" to control their behavior. The current settings only become effective beginning with the first selected keyframe. The next keyframe activates the settings present at that keyframe. The area between two keyframes approximates the corresponding effects settings ("tweening").
- Video effects can be controlled using effects curves. A curve is shown in the video's object display which controls the application of the effect; the higher the curve, the more intense the effect. Keyframes are indicated by curve [handles](#), and these can be manipulated as desired. For every curve handle, Bezier handles can be generated to create harmonic curves and effects automations.
- Effects presets are standardized effects configurations for the most important cases. They can be used via drag & drop; just hold down the mouse [button](#) and drag the selected effect from the Media Pool to the desired object - finished.
- The effects mixer ("Slide FX") combines or interweaves an assortment of recordings to create a complex visual arrangement. To execute this effect, simply drag the transitions to the space between two videos.

## Slideshow Maker

Slideshow Maker turns drab photo collages into spectacular multimedia shows. With just one click, your footage is professionally optimized and enhanced with suitable music, authentic noises, smart transitions, text templates that can be edited, animations, effects and video clips. Just try it out!

## Effects

MAGIX [Movie](#)

Edit Pro 16 offers numerous effects and effects settings options as described in detail in the chapter "Effects and titles". A short overview:

- Every object (every video, every single [scene](#), every photo, and every [audio](#) recording) can be provided with its own individual effects combination. Every effects combination can be saved separately so that you can use it later on different objects. Right click the object and choose the "Save video effects" option in the [context menu](#).
- Video effects are selected and set up in the "Effects" folder in the Media Pool. Most effects allow "keyframes" to control their behavior. The current settings only become effective beginning with the first selected keyframe. The next keyframe activates the settings present at that keyframe. The area between two keyframes approximates the corresponding effects settings ("tweening").
- Video effects can be controlled using effects curves. A curve is shown in the video's object display which controls the application of the effect; the higher the curve, the more intense the effect. Keyframes are indicated by curve [handles](#), and these can be manipulated as desired. For every curve handle, Bezier handles can be generated to create harmonic curves and effects automations.
- Effects presets are standardized effects configurations for the most important cases. They can be used via drag & drop; just hold down the mouse [button](#) and drag the selected effect from the Media Pool to the desired object - finished.
- The effects mixer ("Slide FX") combines or interweaves an assortment of recordings to create a complex visual arrangement. To execute this effect, simply drag the transitions to the space between two videos.

## Slideshow Maker

Slideshow Maker turns drab photo collages into spectacular multimedia shows. With just one click, your footage is professionally optimized and enhanced with suitable music, authentic noises, smart transitions, text templates that can be edited, animations, effects and video clips. Just try it out!

## MAGIX Soundtrack Maker

If you need a soundtrack, MAGIX Soundtrack Maker offers a massive selection of suitable sounds for background music in different variations, from "funky" to "easy listening" ? simply add music to your [movie project](#). The result is real [movie](#) background music with changing moods to perfectly match your images.

## Multimedia editable DVD menus

The program includes many DVD [menu](#) templates (for chapter selection, etc.) for projects intended for TV, and some are also in 16:9 widescreen format. They can be easily inserted during the burning process to give the DVD a professional look.

Every menu template can be customized with your own photos, thematic animations, 3D titles, sound, [intro](#) videos, etc. Write with flowers if your video takes place on a meadow, or with clouds if you've flown somewhere. A lovingly created [menu](#) always makes a great impression. It's your video's calling card.

## Time-saving VHS copying technique

Use your analog PC video card to quickly transfer old videos to high-quality [MPEG-2](#) format directly from your VHS recorder. The [movie](#) and its interactive [menu](#) can be automatically burned directly to disc after capture/transfer.

## MAGIX Videorecorder

MAGIX Videorecorder's design is especially suited for viewing and navigating videos, photos, [audio](#), and TV by remote control. MAGIX Videorecorder includes:

- **TV/Video recorder for analog TV and DVB-T/S** for easily recording TV on your PC. You can easily select and record analog TV and DVB programs with your PC-[compatible](#) remote control.
- **Improved PC-remote control compatible MAGIX Online TV Guide (EPG):** With the DVB program guide, you can access all available information related to the selected program, record it directly, or earmark it for fully automatic recording. You can also open an illustrated Internet program guide with plenty of detailed information.

MAGIX Videorecorder can be opened separately via the "Start" [menu](#) or activated in MAGIX [Movie](#) Edit Pro 16's recording [dialog](#), which can be accessed via the red [button](#) below the preview monitor.

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## **Task assistant + Video tooltips**

The "Tasks" [menu](#) option provides all of the important functions as well as tips & tricks for your movies. With the applicable tool tip you receive valuable information. Just a simple click immediately opens the desired function or a wizard video for the task.

# Extra in the Plus version

## Additional disc formats

- **WMVHD (Windows Media High Definition Disc):** WMVHD is a type of disc optimized for [movie](#) playback on PCs. The movies are converted into high-resolution Windows Media 9 format and a [menu](#) is added, like with DVDs. Windows Media Player 9, or higher is required for successful playback. Video encoding will be preset for [HDTV](#) resolution (1280 x 720, also known as "[720p](#)")
- **JPEG disc (for displaying photos on TV):** With the "JPEG disc" option, every photo in the [disc project](#) is individually exported and burned to a CD or DVD in JPEG format. The disc can be played back later using photo disc-[compatible](#) DVD players. If a [project](#) contains several slideshows, a subfolder will be created for each one, and the corresponding images will be placed into each one. On a JPEG disc there are no menus, sounds, animated effects or transitions. However, it does offer the best possible quality available for TV playback.
- **AVCHD disc:** Burn a disc in the [AVCHD](#) format here. This high-resolution format makes it possible to add 30 minutes of film to a DVD or 160 minutes of film to a Blu-ray Disc.
- **MultiDisc:** Conventional video DVD, high-resolution HD discs, and complete backup projects are burned onto the disc.

## Download media directly from the Internet

Videos, pictures, texts, and sounds which are freely available on the Internet can be found and copied into the Media Pool at the click of a [button](#) via the newly integrated web [browser](#). [Audio](#) files can be recorded using the analog input on the sound card, and video recorded directly from the screen. The media files are then immediately available for use in your own [project](#). You can find this function in the Media Pool under "Tasks -> Import -> Online media".

## Support for AVCHD camcorders

MAGIX [Movie](#) Edit Pro 16 Plus also supports camcorders that use the [AVCHD](#) format. AVCHD is currently used by video cameras that record directly to DVDs, SD cards, memory sticks, or [hard disk](#). Files from AVCHD cameras can be either read directly or imported. During import the files can be converted to [MPEG](#)

-2 format. Import requires approximately three times the playback time.

**Hint:**For AVCHD support Dolby® Digital Stereo import must be activated. For AVCHD import, MPEG2 codec must be activated. Read the hints for using AVCHD in the chapter "[Import and export](#)" or the PDF tutorial "Working with AVCHD material"!



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## Synthesizer

The Ambient Synth is a well-developed tool for easily producing realistic natural noises, from rain and thunderstorms to animal sounds and [traffic](#) noise. The Drum&Bass machine includes throbbing bass lines and powerful beats in one device, allowing you to create great modern mood music, even if you don't have previous experience.

## DV logging

MAGIX [Movie](#) Edit Pro 16 Plus also features a DV logging option. You no longer need to save large DV-[AVI](#) and [audio](#) files, since MAGIX Movie Edit Pro 16 saves the position of this material on the DV tape and imports missing files automatically when reloading the DV tape.

## Custom multi-channel Surround 5.1 sound

Create custom multi-channel Surround 5.1 sound for your videos. With Dolby Digital® [audio](#) (5.1 Surround) you can burn your videos for any DVD player (requires a fee-based Dolby Digital® codec activation).

## Customize keyboard shortcuts

Keyboard shortcuts are very useful for working more quickly and professionally. For this reason, MAGIX [Movie](#)

Edit Pro 16 Plus offers an editor for individual adjustment of keyboard shortcuts for almost all important commands.

## Create a disc project as an ISO image

MAGIX [Movie](#) Edit Pro 16 Plus now allows you to save your [disc project](#) as an ISO [image](#) file as well. "ISO" image is the technical term for the exact memory map of the content of a disc. An ISO image file can work directly with all standard burning programs and makes multiple burnings especially easily.

Select the "[Image](#)" option under "Burner" to do so.

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## MAGIX Xtreme Print Center

MAGIX Xtreme Print Center is a printing suite for CD, DVD, and VHS label printing. You can conveniently print perfect stickers, covers, inlays, and booklets for your projects.

## MAGIX Xtreme Photo Designer

MAGIX Xtreme Photo Designer offers you high-quality [image](#) editing [software](#) for any situation. The newly integrated Task Assistant explains frequently used tasks in an easy-to-understand manner. The program interface is now even more intuitive due to an entirely new program interface look and improved user navigation. MAGIX Xtreme Photo Designer can be accessed via the "Effects" [button](#) for each [scene](#) or the [context menu](#) for [image](#) files.

## MAGIX Music Editor

MAGIX Music Editor is a full [WAV](#) editor with all necessary cutting, editing & effect functions as well as numerous import/export functions. You can open [audio](#) objects from MAGIX [Movie](#) Edit Pro 16 with a mouse click in the MAGIX Music Editor. There you'll be able to take advantage of lots of additional powerful tools, for example, a function for freehand drawing of waveforms. This can be used to fix the most stubborn distortions that cannot be eliminated completely using the MAGIX [Movie](#) Edit Pro 16 DeClicker.

## More extras

- TV ad killer (removes TV commercial blocks automatically)
- 99 stereo tracks for more flexible arranging
- Professional reference track (according to TV and [movie](#) standard)
- [VirtualDub plug-in](#) interface for external video effects or removing TV channel logos
- BPM recognition for music videos with precise rhythmic editing options
- Import/export of Bitmap and TIF series (e.g. from 3D applications)
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# Work areas

In this chapter

["Record" screen](#)

["Edit" screen](#)

[Video monitor](#)

[Media Pool](#)

[Toolbars](#)

[Arranger](#)

[Adjusting the workspace](#)

[The "Burn" screen](#)

# "Record" screen



- 1 **Menubar:** The different menus give you access to MAGIX [Movie](#) Edit Pro 16's different functions.
- 2 **Toolbar:** Here you will find a number of buttons for quick access to important functions.
- 3 **Screens:** Here you will find the switches for the "Record", "Edit", and "Burn CD" screens.
- 4 **Preview monitor:** In the preview monitor you can view your recorded or imported video.
- 5 **Transport control:** The transport control resembles the playback controls of a DVD player. You can use these buttons to control the preview in the preview monitor.
- 6 **Record functions:** The "Record", "Import file", "Copy CD/DVD" (PLUS version only), and "TV & Media Center" buttons can be used to start the main functions of these screens.
- 7 **Filmbox:** Movies and their preview images will be added to the filmboxes during importing.

# "Edit" screen



- 1 **Upper button bar**  
: Here are the buttons for quick access to important commands.
- 2 **Menu bar**: Most functions in MAGIX [Movie](#) Edit Pro 16 can be accessed via the [menu](#) bar.
- 3 **Program monitor**: Video and [image](#) objects are displayed and files from the Media Pool can be previewed here.
- 4 **Templates**  
: Here you can find the directories for fades, transitions, titles, effects and movements. To preview a template, simply click on it to see a preview. With "Catooh" you will be directly connected to the Internet to open the Online Media Library.
- 5 **Media Pool**  
: In the Media Pool you can load your photos and other media files. Using the generic navigation icons you can access any drive or folder on your PC.
- 6 **Modes**  
:
  - [Storyboard mode](#) displays all scenes in the current video in a panel so that they can be easily manipulated and arranged.
  - **Timeline mode** is for more involved arrangement and effects work.
  - **Overview mode** displays all the objects on the first track and enables quick sorting of the scenes.
  - The right [button](#) activates **Multicam mode** in the Plus version.
- 7 **Lower toolbar**

: Here you can select the Timeline or different mouse modes for various editing functions.

**8 Timeline with range markers**

: Defines the range that will be played. In Timeline mode, this is done using time intervals.

**9 Arranger**

: Drag & drop files from the Media Pool, then arrange and edit files in detail here.

**10 Scroll bars**

: The lower scroll bars can be dragged apart and pushed together for zooming with the mouse. The right scroll bar vertically zooms into the tracks. The right scroll bar zooms vertically into the tracks. Click on the edge of the scroll bars with the mouse button held down to change the visible window in the arranger.



# Video monitor

All selection processes are conducted on the video monitor. Here you can view and edit material before importing. There is a preview function for all of the files in the Media Pool.

- Use the playback [button](#) to start the preview of video or [image](#) objects in Media Pool. For special objects like titles or fades a preview is given.
- [Audio](#) files and synthesizer objects from the Media Pool can also be listened to using the playback [button](#).

**Tip:** Useful presets for the arranger and video monitor can be found in the tab [Display presets](#) in the program settings.

## Full screen view

The option "full screen" in the [context menu](#)

maximizes the preview monitor. Alternatively, a double click on the monitor or "A+Enter" also maximizes the window. The fullscreen view is especially recommended for working with two screens; one screen for the film preview, and the other for the arranger.

You can also shift the monitor into full screen mode and access it via the context [menu](#) (right mouse [button](#)

). There, you can also hide and display the basic transport controls.

With "Esc" you will go back to the normal view (or click on "smaller" [button](#) to the right in the fullscreen mode).

## Show movie overview

The option "Film overview" in the "Window" [menu](#)

enables an overview of the entire arranger. All objects in the arranger will be displayed in the program monitor. The overview display is especially recommended for work with long movies because the reduced overview in the program monitor and the zoomed detailed view in the arranger present a good combination.

The film overview can be used for moving around in the [movie](#) and for editing certain parts:

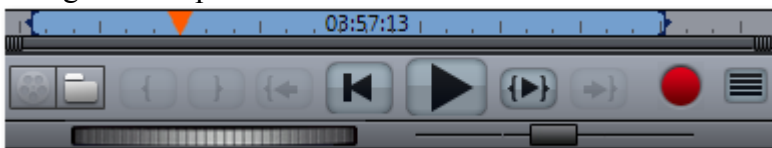
- When you click on a certain object in the video monitor, the arranger will zoom on that object.
- Using the mouse, you can draw a [frame](#) in the video monitor and the corresponding range will be zoomed in the arranger.
- When you move the playback marker in the video monitor, the arranger playback marker will also move correspondingly.

**Tip:**

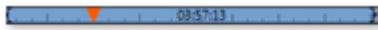
If you use this option very often, you can use the keyboard shortcut (Shift + A).

## Transport control

The transport controls in the program monitor enable you to play back video and photo material in the arranger or as a preview in the Media Pool.



## Transport control buttons



### Range

: Above the playback functions, the range between the in and out points can be changed by clicking.



**Playback marker:** This marker indicates the location of the [image](#) currently displayed on-screen.



**Media Pool/Arranger:** This [button](#) allows you to switch between the Arranger's transport control and the selected files in the Media Pool (preview function).



### Set in/out points

: Defines the start and end of the playback range.



### To the start:

This [button](#) sets the playback marker to the start of the current area.



**Jump to start of film:** Sets the playback marker to the start of the [movie](#).



### Play/Stop (pause)

: The playback button in the middle starts playback. A second click ends playback.

**Tip:** In the [menu](#)

"File -> Settings -> Program -> Playback", you can set whether the playback marker will go back to the start position (stop) after the second click or following the appropriate shortcut (space bar), or if it should stay at the current position (pause function).



### Area playback

: This button plays back the current range.



### To the end

: This button sets the playback marker to the end of the current range.



### Audio or video recording

: Quickly jumps to the Recording selection dialog.



### Film overview



### Jog wheel

: Using this wheel, you can move by single frames within the video and position the playback marker exactly at high magnifications.



**Shuttle control:** The further the [slider](#) control is moved to the side, the quicker the arrangement is played in the corresponding direction. This way a certain position can be reached quickly.

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). There, you can also hide and display the basic transport controls.

With "Esc" you will go back to the normal view (or click on "smaller" [button](#) to the right in the fullscreen mode).

## Show movie overview

The option "Film overview" in the "Window" [menu](#)

enables an overview of the entire arranger. All objects in the arranger will be displayed in the program monitor. The overview display is especially recommended for work with long movies because the reduced overview in the program monitor and the zoomed detailed view in the arranger present a good combination.

The film overview can be used for moving around in the [movie](#) and for editing certain parts:

- When you click on a certain object in the video monitor, the arranger will zoom on that object.
- Using the mouse, you can draw a [frame](#) in the video monitor ? and the corresponding range will be zoomed in the arranger.
- When you move the playback marker in the video monitor, the arranger playback marker will also move correspondingly.

### Tip:

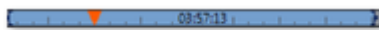
If you use this option very often, you can use the keyboard shortcut (Shift + A).

## Transport control

The transport controls in the program monitor enable you to play back video and photo material in the arranger or as a preview in the Media Pool.



## Transport control buttons



### Range

: Above the playback functions, the range between the in and out points can be changed by clicking.



**Playback marker:** This marker indicates the location of the [image](#) currently displayed on-screen.



**Media Pool/Arranger:** This [button](#) allows you to switch between the Arranger's transport

control and the selected files in the Media Pool (preview function).



**Set in/out points**

: Defines the start and end of the playback range.



**To the start:** This [button](#)

sets the playback marker to the start of the current area.



**Jump to start of film:** Sets the playback marker to the start of the [movie](#)



**Play/Stop (pause)**

: The playback button in the middle starts playback. A second click ends playback.

**Tip:** In the [menu](#)

"File -> Settings -> Program -> Playback", you can set whether the playback marker will go back to the start position (stop) after the second click or following the appropriate shortcut (space bar), or if it should stay at the current position (pause function).



**Area playback**

: This button plays back the current range.



**To the end**

: This button sets the playback marker to the end of the current range.



**[Audio](#) or video recording**

: Quickly jumps to the Recording selection dialog.



**Film overview**



**Jog wheel**

: Using this wheel, you can move by single frames within the video and position the playback marker exactly at high magnifications.



**Shuttle control:** The further the [slider](#)

control is moved to the side, the quicker the arrangement is played in the corresponding direction. This way a certain position can be reached quickly.

## Show movie overview

The option "Film overview" in the "Window" [menu](#) enables an overview of the entire arranger. All objects in the arranger will be displayed in the program monitor. The overview display is especially recommended for work with long movies because the reduced overview in the program monitor and the zoomed detailed view in the arranger present a good combination.

The film overview can be used for moving around in the [movie](#) and for editing certain parts:

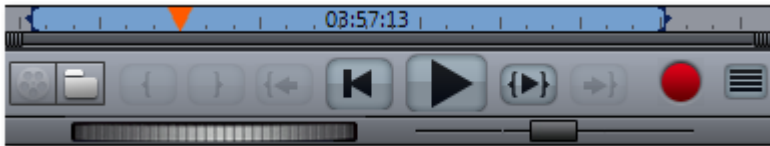
- When you click on a certain object in the video monitor, the arranger will zoom on that object.
- Using the mouse, you can draw a [frame](#) in the video monitor and the corresponding range will be zoomed in the arranger.
- When you move the playback marker in the video monitor, the arranger playback marker will also move correspondingly.

### Tip:

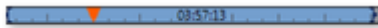
If you use this option very often, you can use the keyboard shortcut (Shift + A).

## Transport control

The transport controls in the program monitor enable you to play back video and photo material in the arranger or as a preview in the Media Pool.



### Transport control buttons



#### Range

: Above the playback functions, the range between the in and out points can be changed by clicking.



**Playback marker:** This marker indicates the location of the [image](#) currently displayed on-screen.



**Media Pool/Arranger:** This [button](#) allows you to switch between the Arranger's transport control and the selected files in the Media Pool (preview function).



#### Set in/out points

: Defines the start and end of the playback range.



#### To the start:

This [button](#) sets the playback marker to the start of the current area.



**Jump to start of film:** Sets the playback marker to the start of the [movie](#)



### **Play/Stop (pause)**

: The playback button in the middle starts playback. A second click ends playback.

**Tip:** In the [menu](#)

"File -> Settings -> Program -> Playback", you can set whether the playback marker will go back to the start position (stop) after the second click or following the appropriate shortcut (space bar), or if it should stay at the current position (pause function).



### **Area playback**

: This button plays back the current range.



### **To the end**

: This button sets the playback marker to the end of the current range.



### **[Audio](#) or video recording**

: Quickly jumps to the Recording selection dialog.



### **Film overview**



### **Jog wheel**

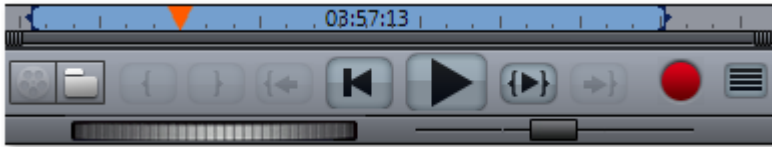
: Using this wheel, you can move by single frames within the video and position the playback marker exactly at high magnifications.



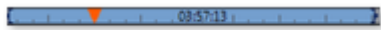
**Shuttle control:** The further the [slider](#) control is moved to the side, the quicker the arrangement is played in the corresponding direction. This way a certain position can be reached quickly.

# Transport control

The transport controls in the program monitor enable you to play back video and photo material in the arranger or as a preview in the Media Pool.



## Transport control buttons



### Range

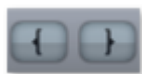
: Above the playback functions, the range between the in and out points can be changed by clicking.



**Playback marker:** This marker indicates the location of the [image](#) currently displayed on-screen.



**Media Pool/Arranger:** This [button](#) allows you to switch between the Arranger's transport control and the selected files in the Media Pool (preview function).



### Set in/out points

: Defines the start and end of the playback range.



### To the start:

This [button](#) sets the playback marker to the start of the current area.



**Jump to start of film:** Sets the playback marker to the start of the [movie](#).



### Play/Stop (pause)

: The playback button in the middle starts playback. A second click ends playback.

**Tip:** In the [menu](#)

"File -> Settings -> Program -> Playback", you can set whether the playback marker will go back to the start position (stop) after the second click or following the appropriate shortcut (space bar), or if it should stay at the current position (pause function).



### Area playback

: This button plays back the current range.



### To the end

: This button sets the playback marker to the end of the current range.



### [Audio](#) or video recording

: Quickly jumps to the Recording selection dialog.



### Film overview

**Jog wheel**

: Using this wheel, you can move by single frames within the video and position the playback marker exactly at high magnifications.



**Shuttle control:** The further the [slider](#) control is moved to the side, the quicker the arrangement is played in the corresponding direction. This way a certain position can be reached quickly.



# Media Pool

The design and operation of the Media Pool is very similar to Windows Explorer. It serves to control and load multimedia files of all kinds: video files, [audio](#) files, fades, effects, and even entire projects. At the same time, it is used as a window for editing different tasks.

## Importing

### Navigation buttons

The navigation buttons let you navigate through your computer's drives and folders.

#### Forwards/Back



The "Back" [button](#) always returns you to the folder you last used.

#### Up



The "Up" [button](#) brings you to the next highest folder level.

#### Folder tree



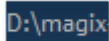
Here you can activate a folder tree to navigate through your computer system.

#### Search



To quickly find specific files, use the search function. You can also specify file type, data and certain folders that should be searched.

#### Browse history list and path details



The current folder's path is displayed in the top center. Use the arrow button to open the [menu](#) to find the folders you previously visited.

#### Options



All functions of the [context menu](#) (switch views, rename, or delete files, etc.) can also be accessed via the options button.

#### Display options



Settings for how detailed the entries should be listed can be made here.

## Computer

The link [button](#)

"Computer" displays the drives in the Media Pool. All drives will be listed along with their drive letters and can be opened with a double click.

## User directory

The second [button](#)

featuring the user's name opens their personal folder in the Media Pool.

## My media

The "My media" [button](#) lets you select "Projects", "My videos", "My music", "My images", and "Recordings".

### **Projects**

Switches to the folder where your projects and videos are usually stored.

### **My videos**

Displays all usable files found in "My documents\My videos."

### **My music**

Displays the contents of the "My Documents\My Music" folder. MAGIX Music Manager also suggests this folder for importing your music collection into the database.

### **My pictures**

Switches to the "My documents\My pictures" folder. This folder is often used by digital cameras and scanners to store transferred images by default. The included MAGIX Photo Manager program also uses this folder (e.g. during [image](#) import).

### **Recordings**

**Recordings:** MAGIX [Movie](#)

Edit Pro 16 stores all recordings here to access all recordings as quickly as possible.

### **MAGIX tools**

The "MAGIX tools" link selects links to "Downloads", "Database", "Online Album", and "Internet Media".

**Downloads:** Use this [button](#) to access the media files that you downloaded with Catooh.

**Database:** Use this [button](#) to open the database view. Right-clicking opens the database search. The database first has to be created using the supplied additional programs MAGIX Photo Manager or MAGIX Music Manager.

### **Online Album**

: This buttons opens MAGIX Online Album. This provides a shortcut to uploading and deleting data. To do this, you must first register on MAGIX Online Album.

There are many ways to upload data:

1. While holding "Ctrl" down, select the data to be uploaded in the Media Pool, and select "Copy" in the [context menu](#) (opened by right-clicking). Switch to the MAGIX Online Album screen, open the desired folder, and select "Paste" in the context [menu](#).
2. In the Media Pool, click on "Online Album", and go to the desired directory. Open the Windows Explorer, select the desired data with "Ctrl" held down, and drag it into the Media Pool.

Both options will result in your desired data being uploaded to your MAGIX Online Album.

### **Hint**








: This function requires an Internet connection. To gain access, make sure you have your login information (email address and password) ready.

**Internet media:** This opens MAGIX [Movie](#) Edit Pro 16's [integrated browser](#). It offers you the possibility to collect media from the Internet to use in the current [project](#)

# Importing

## Navigation buttons

The navigation buttons let you navigate through your computer's drives and folders.

- Forwards/Back**  The "Back" [button](#) always returns you to the folder you last used.
- Up**  The "Up" [button](#) brings you to the next highest folder level.
- Folder tree**  Here you can activate a folder tree to navigate through your computer system.
- Search**  To quickly find specific files, use the search function. You can also specify file type, data and certain folders that should be searched.
- Browse history list and path details**  The current folder's path is displayed in the top center. Use the arrow button to open the [menu](#) to find the folders you previously visited.
- Options**  All functions of the [context menu](#) (switch views, rename, or delete files, etc.) can also be accessed via the options button.
- Display options**  Settings for how detailed the entries should be listed can be made here.

## Computer

The link [button](#)

"Computer" displays the drives in the Media Pool. All drives will be listed along with their drive letters and can be opened with a double click.

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The second [button](#)

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Switches to the folder where your projects and videos are usually stored.

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Displays all usable files found in "My documents\My videos."

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Both options will result in your desired data being uploaded to your MAGIX Online Album.

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**Internet media:** This opens MAGIX [Movie](#) Edit Pro 16's [integrated browser](#). It offers you the possibility to collect media from the Internet to use in the current [project](#)

.

## Fades

This provides a list of all fades sorted into categories. Clicking on a category shows all of the fades contained therein.

To load a fade, click on it and drag it onto a [scene](#) which you would like to blend into. Alternatively, you can select the scene into which you would like to blend into before and double click on the fade in the Media Pool later.

**Tip:** All fades will appear in the [menu](#) between two scenes, and they can also be selected there.

## Title

Title presets and the [Title Editor](#) are located here. They are sorted into various categories and can be loaded via a double-click or drag & drop. You will also find templates for 3D titles here. The text of title objects can be changed in the program monitor by double-clicking on it.

## Effects

Access the effects presets via "Video effects", "Movement effects", "[Audio effects](#)", and "Design elements".

### Video effects

These are the various effects which can be applied to videos and stills. The effects can be set after an object is selected in the respective effects [dialog](#) which appears. For more information, see the "[Video effects in the Media Pool](#)" chapter.

### Movement effects

These are movement effects you can use to animate the [frame](#) by using zoom or camera movements. For more information, go to the "Effects and titles" chapter in "[Movement effects in Media Pool](#)".

### Audio effects

In addition to many different [audio](#) effects presets (echo, reverb, equalizer, compressor, etc.), you can also use the included synthesizer. A synthesizer can be dragged onto the arranger like a multimedia file. It will be displayed as a synth object. Use the corresponding control console to edit the synth sounds and melodies. The control console opens automatically when the synthesizer is dragged onto the arrangement for the first time. A synth object can be opened for further editing later by double clicking.

### Design elements

**Multi picture-in-picture:** These are various effects presets for [image](#) stacking.

#### Collages

: These work similarly to normal picture-in-picture effects, but more objects are used. Depending on the collage, arrange the selected objects one after the other and drag the collage onto the first object.

#### Portrait effects

: Select individual effects which are especially suited to vertically formatted photos.

#### Image objects

: These are various image objects like black bars, thought bubbles for cartoons, etc.

#### Intros/Outros

: These are beginning and end scenes for films with various themes.

#### Visuals

: Graphical displays of any played sounds which can be combined with other video material.

## Various file list view modes

In the **file list**, all of the supported multimedia files and subfolders of the currently selected folder are displayed. Three different views (list, detail, large symbols) can be set by right clicking on the Media Pool [context menu](#)



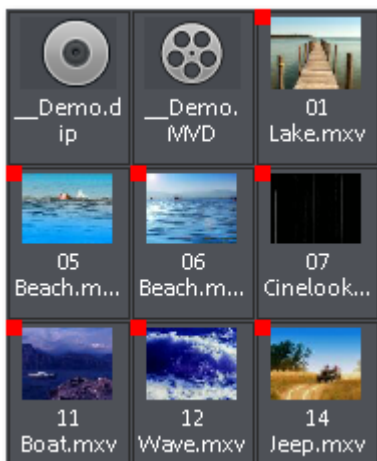
### List:

Only file names are listed. This view mode displays the most files simultaneously.

Name	Type	Size
astronaut	.bmp	2,359,3
Bahamas_22	.jpg	416,1
Bahamas_25	.jpg	394,1

### Details:

In the details section the type, size, and date of modification are shown for every media file beside its name. The list can be sorted by clicking on any of these details.



**Large icons** can be quite useful because they show a preview [frame](#) for each [movie](#) and picture file. This allows you to sort through the material quicker. One disadvantage is that it takes longer for the file list to be displayed.



## Preview function

This is a preview function for all files in the Media Pool which can be started by dragging & dropping onto the video monitor or by pressing the play [button](#)

There are also previews for effects that illustrate their functionality.

The "Extras" [button](#)

or the enhanced transport control function provides a selection of sections from a longer video file in the Media Pool. Please refer to the Inserting objects into the project chapter.

# Toolbars

## Upper button bar



The upper [button](#) bar can be found in the monitor to the top left. It has the following functions:

In this section:

[New project](#)

[Load project](#)

[Save project](#)

[Program settings](#)

[Context help](#)

[MAGIX News Center](#)

## New project



Creates a new MAGIX [Movie](#) Edit Pro 16 [project](#). A [dialog](#) with [settings for a new disc project or a new film](#) opens to get started.

Keyboard shortcut: Shift + N

## Load project



Use this option to load a [movie](#) into your [disc project](#). Please note that all media files associated with it must be accessible. MAGIX Movie Edit Pro 16 will search for all used sounds and video files in the folders in which they were located when the movie was saved.

Keyboard shortcut: Ctrl + O

## Save project



The current [movie](#) is saved with the name displayed in the [project](#) window. If you have not yet specified a name for your project, a [dialog](#) will open wherein MAGIX Movie Edit Pro 16 asks you to do so.

### **Please note**

: In the project file (\*.MVP), all information about the used media files, cuts, effects, and titles are saved, but not the picture and sound material itself. This is found in the recorded or imported media files that remain unchanged during the entire MAGIX Movie Edit Pro 16 editing process. To save the full movie into a dedicated directory, for instance to continue editing on a different PC, please use the command "Copy movie and media into directory".

Keyboard shortcut: Ctrl + S

## Program settings



Opens the [program settings](#)

Keyboard shortcut: Y

## Context help



By choosing the context help entry from the "Help" [menu](#), or by clicking on the [button](#) in the top [toolbar](#), the mouse cursor will turn into an arrow with a question mark.

Then, when you click on any [button](#) of the main screen, program help describing the control element in question will open.

Shortcut key: Alt + F1



## MAGIX News Center



MAGIX can supply you with all of the latest information about your [software](#)

. In the MAGIX News Center, you will find all of the links to current online tutorials as well as tips & tricks on individual topics or software application examples.

You will also be informed of the availability of brand new updates and patches for your program as well as special offers, contests, and surveys.

The news is split into three color-coded sections:

- Green for practical tips & tricks for your software
- Yellow reports the availability of new patches and updates for your product
- Red for special offers, contests, and surveys
- And if there are no new messages, then the [button](#) will be grey

All available information is shown as soon as you click on MAGIX News Center. If you click on one of the news items you will be forwarded to the corresponding website.

## Lower toolbar



The following buttons are available in "Overview" and "Timeline" modes:

In this section:

[Select a movie to edit](#)

[Undo](#)

[Restore](#)

[Delete objects](#)

[Title editor](#)

[Mute button](#)

[Mixer](#)

[Cut button](#)

[Paste modes](#)

## Select a movie to edit



Using the dropdown [menu](#), you can control various movies within a [project](#)

## Undo

During [project](#)

editing, you can undo the last changes you made. This way it's no problem if you want to experiment with critical operations. If you don't like the results, then you can always revert to the previous state by using "Undo".

Keyboard shortcut: Ctrl + Z

## **Restore**

The "Redo" function undoes the previous "Undo" function.

Keyboard shortcut: Ctrl + Y

## Delete objects



This function deletes the selected [scene](#) (or the selected object in "Timeline" mode).

Keyboard shortcut: Del

## Title editor



Opens the [title editor](#) for the selected photo, video, or title object.

Keyboard shortcut: Ctrl + T

## Mute button



This [button](#) mutes the sound output.



## Mixer



This option allows you to display or conceal the real-time mixer. You will find further information, especially with regard to the integration of effects plug-ins, in the chapter "Mixer".

Keyboard shortcut: M

## Cut button

You can access the individual options using the dropdown [menu](#)

### Split



This command cuts a [scene](#) at the point where the playback marker is positioned. This way, two free-standing objects are created.  
Keyboard shortcut: T

### Remove start



This command cuts a [scene](#) at the point where the playback marker is positioned and removes the material before the playback marker.  
Keyboard shortcut: K

### Remove end



This command cuts a [scene](#) at the point where the playback marker is positioned and removes the material behind the back marker.  
Keyboard shortcut: U

### Hint:

If the commands "Split" and "Remove beginning/end" are applied without a selection, all objects at the position of the playback marker are cut.

### Remove scene



This command allows you to completely remove selected scenes. The scenes that follow will be automatically moved to the end of the [scene](#) in front of the scene to be removed.

Keyboard shortcut: Ctrl + Del

### Split movie



Splits the [movie](#) at the playback marker position into two sections within one [project](#). These can be individually controlled using the "Window" [menu](#) or the [button](#) "Select movie for editing" (see above).

Keyboard shortcut: Alt + W

## **Paste modes**

MAGIX [Movie](#) Edit Pro 16 provides various options for how an object selected in the Media Pool will be pasted into the [project](#)

.

In this section:

[Apply automatically](#)

[Intelligent ripple](#)

[Single-track ripple](#)

[Multitrack ripple](#)

[Replace](#)

[Overwrite](#)

### **Apply automatically**



Pastes the file selected in the Media Pool into the arranger.  
Video and [image](#) objects will always be placed behind the last object into the first track; [audio](#) and text objects are separated into different tracks.

## Intelligent ripple



Inserts an object from the Media Pool at the position of the playback marker and simultaneously moves the objects following it.

- In contrast to automatic insertion, all objects will be inserted at the position of the playback marker.
- Videos and images are placed on the first track. If another object is found at the playback marker position, then it will be cut continued at the end of the inserted object (so that the inserted object can start exactly at the point of insertion).
- The objects lying further along on the track will be moved further down.
- Objects on other linked tracks (all objects up to the first completely empty track) will also be moved further down. This includes sound tracks, fades, and titles, all of which will be moved together so that nothing gets mixed up. All objects will be moved which start at the same position as or behind the playback marker.

### Note

: The prerequisite for a good ripple effect is that the soundtrack, most importantly, is cut at the position of the playback marker. Otherwise, the elements located further down would move down even more, while the soundtrack would stay at its old position, causing picture and sound to separate from each other. If you would like to create an intelligent ripple, make sure that the starting points of all objects that are to be moved are positioned at or behind the playback marker. If this is not the case, click on the screen to cut the corresponding object at the playback marker position.

## Single-track ripple



Inserts an object from the Media Pool at the position of the playback marker and simultaneously moves the objects on the track following it.

- The one-track ripple behaves similarly to the intelligent ripple, the difference is that only the objects on the target track are moved. Bordering tracks are unchanged.
- In contrast to automatic insertion, all objects will be inserted at the position of the playback marker.
- Videos and images are placed on the first track. If another object is found at the playback marker position, then it will be cut continued at the end of the inserted object (so that the inserted object can start exactly at the point of insertion).
- The objects lying further along on the track will be moved further down.

## Multitrack ripple



The object selected in the Media Pool will be inserted on the target track at the position of the playback marker. All objects found at the playback marker position will be split and moved down the length of the inserted object. All objects on the track located further on will also be moved.

- The multitrack ripple behaves similarly to the intelligent ripple, but the difference is that all objects on all tracks following the playback marker's position will be moved.
- In contrast to automatic insertion, all objects will be inserted at the position of the playback marker.
- Videos and images are placed on the first track. If another object is found at the playback marker position, then it will be cut continued at the end of the inserted object (so that the inserted object can start exactly at the point of insertion).
- If other objects are located at the playback marker position, these will also be separated and moved further along the track.
- Objects lying further along on all tracks will be moved further down.

## **Replace**



Replaces the selected object with an object selected in the Media Pool.



## Overwrite



Overwrites the object in the target track at the position of the start marker with the object selected in the Media Pool.

### Hint:

In contrast to "Replace", no length adjustment takes place. With "Replace", any downstream objects are moved, while "Overwrite" overwrites downstream objects as well (sometimes only partially), depending on the length of the object being inserted in comparison to the object being overwritten.

## Additional buttons in Timeline mode



The following buttons are only available in "Timeline" mode:

In this section:

[Set chapter marker](#)

[Object grid](#)

[Form group](#)

[Ungroup objects](#)

[Mouse modes](#)

## Set chapter marker



Sets a chapter marker at the position of the playback marker. This creates a chapter entry in the disc [menu](#), in case you are planning to burn the [movie](#) to CD/DVD.

You can rename your chapter markers by right clicking and selecting "Rename". The name then appears in the [chapter menu](#)

Shortcut: Shift + Enter

## Object grid



Use this [button](#)

to switch the object grid on and off. When the object grid is switched on, the objects snap into place beside one another so that everything fits in seamlessly.

## Form group



Orders all selected objects into groups. As soon as an object from the group is selected, all other objects in the group will be highlighted as well so that you can work on them collectively.

Keyboard shortcut: Ctrl + L

## Ungroup objects



This turns all selected objects into free-standing objects again.

Keyboard shortcut: Ctrl + M

## Mouse modes



MAGIX [Movie](#) Edit Pro 16 offers special mouse modes for different kinds of editing. They can be selected using the small arrow next to the [button](#)

In this section:

[Intelligent mouse mode](#)

[Mouse mode for individual objects](#)

[Curve mouse mode](#)

[Stretch mouse mode](#)

[Preview audio mouse mode](#)

## Intelligent mouse mode



In principle, this mouse mode behaves like the "Single object mouse" mode.

However, all objects that border the object on the same or on adjacent tracks are also moved, starting from the mouse position. This means that all objects overlapping adjacent tracks (fades, fade effects) and those directly connecting to the next one (hard cuts) are pushed together up to the next empty space in the arrangement (the technical term for this action is "Ripple until black").

This is useful for preventing destruction of fades you have already set and want to move an object included therein. To move individual object, switch to "Single object mouse" mode. You can also drag an object vertically onto a free track, thereby breaking the connection with the following objects. You will then be able to move it freely without having to move other objects with it.

Keyboard shortcut: Alt + 2



### **Mouse mode for individual objects**



This is the preset mouse mode which performs most of the work.

Select objects with a left click. You can move an object by dragging it to the desired position.

Keyboard shortcut: Alt + 1

## Curve mouse mode



This mouse mode is used especially for drawing effects curves.

The effects curve controls the intensity of the effect: The higher the curve point, the more intense the respective effects parameter at this location. The curves can be used for video and [image](#) objects on the image tracks and also for [audio](#) objects on the audio tracks.

More information about this can be found in the chapter "Animate objects", section "Editing object effects curves".

Keyboard shortcut: Alt + 3

## Stretch mouse mode



This special mode is for customizing the length of objects.

With timestretching, [audio](#) objects can be expanded or compressed using the [handles](#) at the bottom. The duration of the audio material is therefore lengthened without changing the pitch. Playback of the video objects is accelerated/decelerated with the help of the handles at the bottom.

**Attention!** If the object to be stretched or compressed is going to be animated with an effects curve, then the option "[Connect curve length with object length](#)" should be set for the effects curve.

Keyboard shortcut: Alt + 4

### **Preview audio mouse mode**

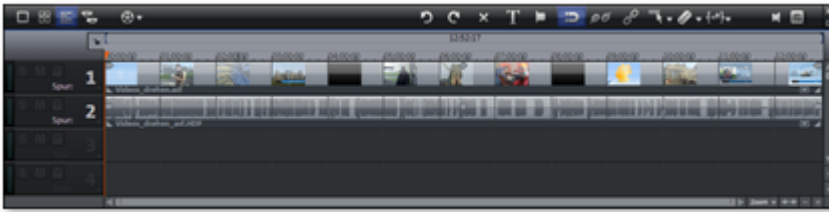


This mode allows you to preview [audio](#) objects (as long as the mouse [button](#) is held down).

In this mode, objects cannot be moved or changed.

Keyboard shortcut: Alt + 8

# Arranger



MAGIX [Movie](#) Edit Pro 16 offers an editing interface for advanced editing: [audio](#) dubbing, professional editing, plus precise transitions and effects editing.



There are corresponding views for different applications: "[Scene](#) overview", "Storyboard" mode, and "Timeline" mode.

# Tracks

The arranger offers tracks for multimedia material positioning and editing. The number of tracks displayed can be specified in the file [menu](#) under "[Movie settings](#)".

In principle, any object type may be placed on any of the tracks. You can also combine video and bitmaps objects with [MIDI](#) and [audio](#) objects on any of these tracks. The maximum length of a movie is restricted to 6 hours.



At the beginning of each track is a track box where you can mute a single audio track with the **M**ute [button](#) or play them **S**olo.

Clicking the lock symbol protects all objects in a track against unwanted editing. The track name can be changed by double clicking the text above the buttons.

## Zooming

The vertical zoom function sets the number of visible tracks in the window. For a lot of tracks, enlarging the view (zooming) is sensible for editing a single track or object.

Use the horizontal zoom function to increase the visible section of the arrangement on the timeline.



### **Enlarge objects**

: Vertical and horizontal zoom stages are enlarged so that all of the selected objects are able to be displayed at maximum size.

If the function is switched off, the zoom stage will be restored.

# Adjusting the workspace

The program monitor, the Arranger, and the Media Pool can be shut off completely or freely repositioned. Personal settings are automatically saved when MAGIX [Movie](#)

Edit Pro 16 is closed and remain unchanged when the program is reopened.

**Program settings -> Display presets** provide a collection of useful configurations for display on the monitor. On systems with only a single connected monitor, only the first two are practical. The presets are explained on the right side of the [dialog](#)

. All window properties of the Arranger, video monitor, etc. can be changed after the application of a preset.

For larger arrangements, the program monitor can be used to show an overview of the Arranger

("Window -> [Movie overview](#)

").

## **Note**

: If you've lost your overview, then you can use "Window -> Reset window arrangement" or the keyboard shortcut "F9" to reset the basic settings.



# The "Burn" screen



- 1 Preview menu:** This is a preview of the selection menu. Read more in the "[Menu](#)" chapter
- 2 Switch views:** Here you can switch between the Preview and Edit views.
- 3 Remote control:** Check how your disc reacts when you press a [button](#) on your remote control.
- 4 Output:** Choose between burning a [project](#), a show optimized for PC, or a web show.
- 5 Play preview:** Here you can playback the menu preview, which you can test with the remote control.
- 6 Template category:** Switch between different templates for designing your menus.
- 7 Menu templates:** Switch between different templates for designing your menus.
- 8 Apply templates:** Here you can select whether a template should be assigned to the page, menu or all disc menus.

## Functionality



Switch to the "Burn" screen first by pressing the [button](#) indicated.

You can burn your movies (including a selection [menu](#)

) onto CD, DVD, Blu-ray Disc, or upload them to MAGIX Online Album.

All movies loaded into the [project](#) are taken into account. If you want to take out some of the movies that are loaded, then you will have to switch back to the "Edit" screen and delete some of them from the project. To do so, switch to the corresponding [movie](#), open the "File" menu and select "[Manage movies](#) -> [Remove movie](#)

"

### Note

: At a screen resolution of 1280 x 1024, the program display changes. This makes the program more manageable and easier to use. The work steps remain the same despite the different display.

For more information about the "Burn" screen, please read the chapter "[Burning discs](#)

". It is assumed that you are working in the "Advanced mode".

# Create new video project

In this chapter

[Movie settings](#)

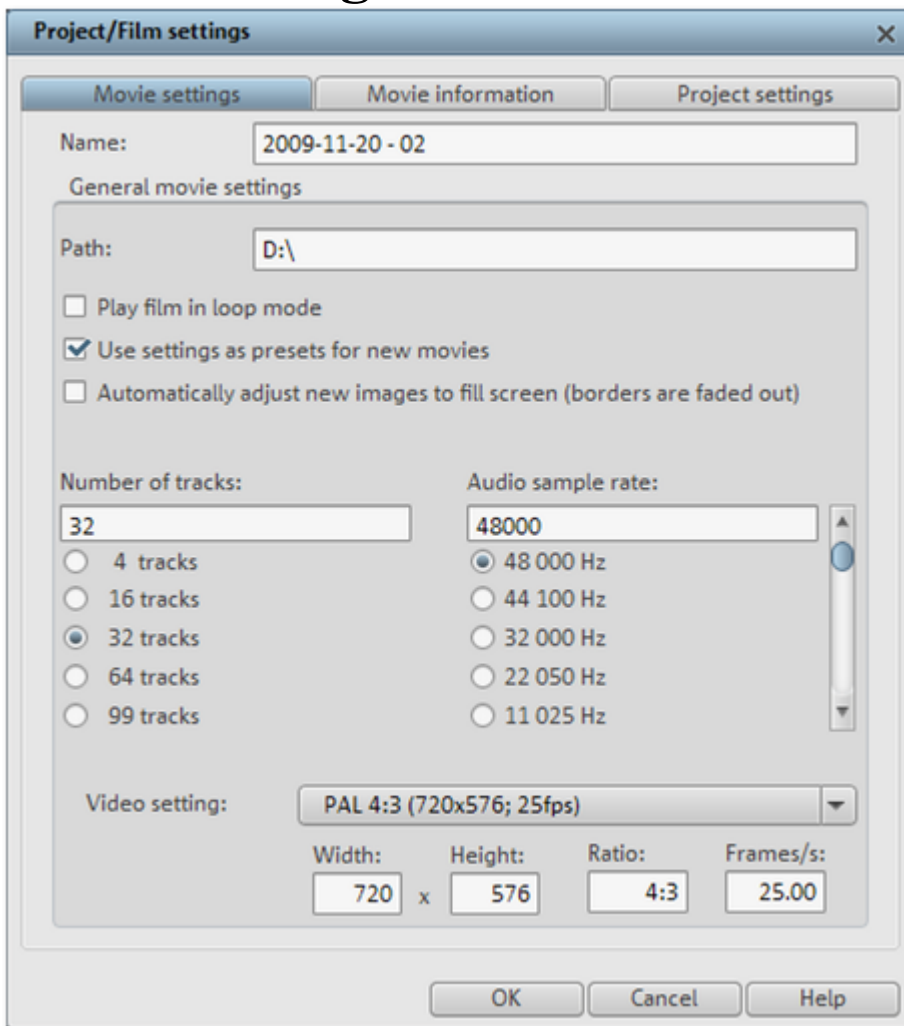
[New project disc settings or new movie](#)

[Load project](#)

[Save project](#)

[Save project as...](#)

# Movie settings



## Settings

**Name:** Here you can enter the name of the current [movie](#)

### **Path:**

This is where you determine the folder on your hard drive in which your movie is saved.

### **Play movie back in loop mode:**

The movie is then played over and over again; that is, once the movie reaches the end marker, it is started again from the beginning.

### **Automatically save:**

The movie is automatically saved in regular intervals. You can set the interval in the system settings (Y key).

### **Number of tracks:**

Here you can change the track number.

### **[Audio sample rate:](#)**

The preset sample rate is 48 kHz. This sample rate is used for all recordings and is also a prerequisite for DVDs. With this setting, optimum sound quality is guaranteed. Audio material at different sample rates (e.g. CD Audio with 44 kHz) is automatically adapted when loaded (resampling). Only change this value if you want to use sound material with a different sample rate or if your sound card does not support this sample rate.

**Video resolution:** This is where you set the standard settings for the picture format and [frame](#) rate for PAL or NTSC TV pictures or for your own format. Please note that [MPEG](#) encoding requires a width/height ratio divisible by 8.

**Use as presets for new projects:** Use the same settings from the [dialog](#) as standard settings for new projects.

## Settings

**Name:** Here you can enter the name of the current [movie](#)

**Path:**

This is where you determine the folder on your hard drive in which your movie is saved.

**Play movie back in loop mode:**

The movie is then played over and over again; that is, once the movie reaches the end marker, it is started again from the beginning.

**Automatically save:**

The movie is automatically saved in regular intervals. You can set the interval in the system settings (Y key).

**Number of tracks:**

Here you can change the track number.

**[Audio sample rate:](#)**

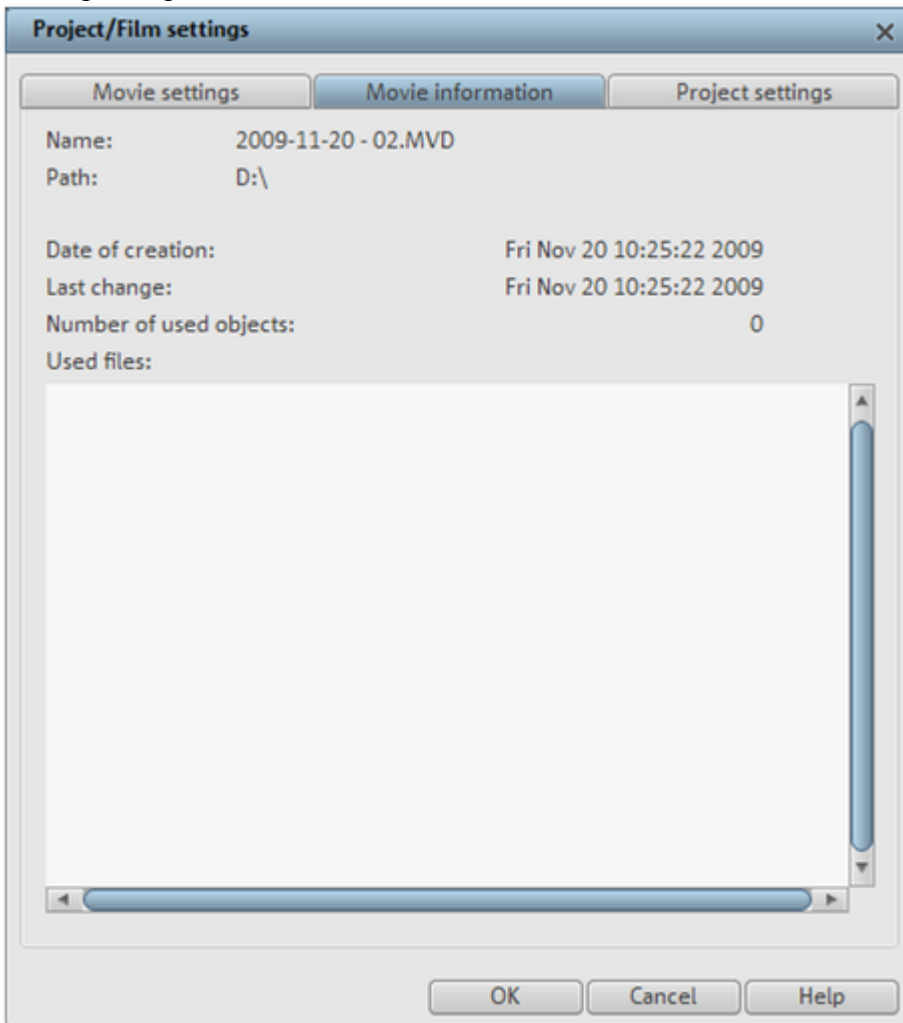
The preset sample rate is 48 kHz. This sample rate is used for all recordings and is also a prerequisite for DVDs. With this setting, optimum sound quality is guaranteed. Audio material at different sample rates (e.g. CD Audio with 44 kHz) is automatically adapted when loaded (resampling). Only change this value if you want to use sound material with a different sample rate or if your sound card does not support this sample rate.

**Video resolution:** This is where you set the standard settings for the picture format and [frame](#) rate for PAL or NTSC TV pictures or for your own format. Please note that [MPEG](#) encoding requires a width/height ratio divisible by 8.

**Use as presets for new projects:** Use the same settings from the [dialog](#) as standard settings for new projects.

## Movie information

This option opens an information window:



**Name:** Enter the name of the current [movie](#)

.

### **Path**

: The path for the folder on your hard drive where your movie is saved.

### **Created on**

: Displays the time the movie was created.

### **Last changed**

: Displays the time of the last save.

### **Number of objects used**

: Displays the number of all objects in the movie.

### **Number of objects used**

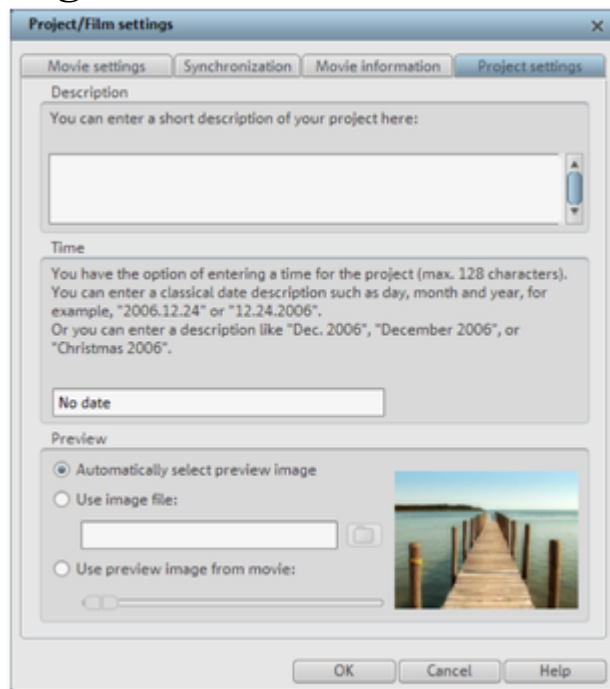
: All files used in the movie are listed here.

### **Keyboard shortcut:**

E

## Project settings

In this [dialog](#), you can view and change the settings for the current film.



### Automatically select preview image

MAGIX [Movie](#) Edit Pro 16 uses an automatically selected preview [image](#).

### Use image file

Clicking the folder [button](#) opens a [dialog](#) to load [image](#) files. In this dialog, you can navigate to the directory where the [image](#) file is found and select it by double clicking.

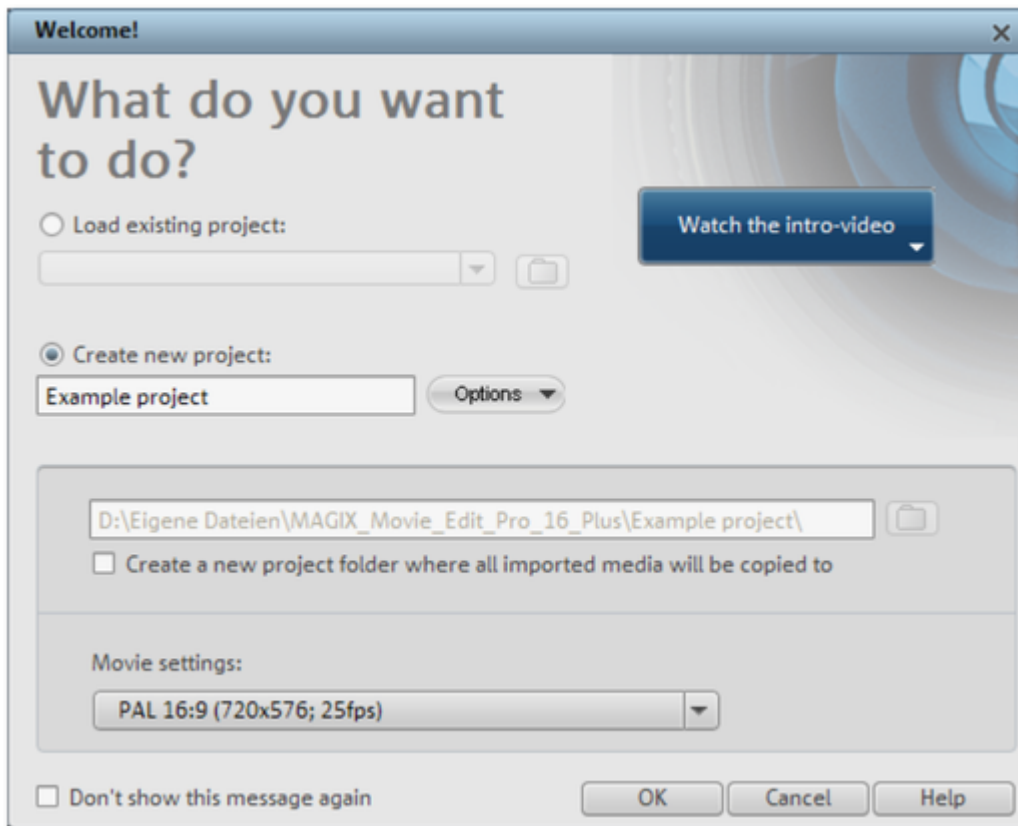
### Use preview image from movie

Use the controller to select a [frame](#) from the corresponding directory.



# New project disc settings or new movie

When you start MAGIX [Movie](#) Edit Pro 16 the following [dialog](#) will open:



Decide in this dialog if you want to "Load an existing movie" for further editing and burning to disc, or if you want to "Create

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We're still at the very beginning, so let's stick with keeping an overview of everything. Click "OK" to end the [dialog](#) and continue.

# Load project



Use this option to load a [movie](#) into your [disc project](#). Please note that all media files associated with it must be accessible. MAGIX Movie Edit Pro 16 will search for all used sounds and video files in the folders in which they were located when the movie was saved.

Keyboard shortcut: Ctrl + O

# Save project



The current [disc project](#) is saved with the name displayed in the [project](#) window. If you have not yet specified a name for your project, a [dialog](#) will open asking you to do so.

Keyboard shortcut: Shift + S

# Save project as...

A [dialog](#)

opens where you can specify the path and name of the video for saving.

Keyboard shortcut: Shift + O

# Video recording

In this chapter

[Connect camera](#)

[Select the recording method](#)

[DV cameras](#)

[DV as MPEG](#)

[HDV camera](#)

[Batch recording](#)

[Logging](#)

[Record dialog analog video recording](#)

[Single frame](#)

[Record screen contents \(Plus version\)](#)

[Edit after recording](#)

[Audio](#)

[AVCHD recording \(Plus version\)](#)

[Import a non-copy-protected DVD](#)

# Connect camera

In this section:

[Connect AVCHD camera \(Plus version\)](#)

[Connect a DV or HDV camera](#)

[Connect analogue video source](#)

## Connect AVCHD camera (Plus version)

[AVCHD](#)

cameras are available in basically three types:

- **Cameras with removable storage:** The camera includes a slot for a memory card. Your computer should feature a card reader for the associated medium so that you can simply insert the card from the camera and import the desired material. Different camera models can be connected via USB.
- **Cameras which burn DVDs directly** (usually 80 mm diameter instead of the regular 120 mm): The DVD can simply be taken out of the camera and inserted into the computer. For so-called "Slot in DVD" drives, look beforehand in the operational manual whether or not 80 mm DVDs (also called 3" DVDs or MiniDVDs) are acceptable.

### Note

: These variants require a special UDF driver (normally included with the camera) to be installed before the DVDs or removable storage can be imported into Windows.

- **Cameras with built-in hard drives:** The camera is preset as a drive as soon as the USB cable is connected to the PC. This additional drive is then visible in the Media Pool. A separate UDF driver doesn't usually need to be installed.

### Note

: The variants listed here and their procedures are explained according to our experience. We also recommend reading the camera's manual for more detailed instructions and contacting the manufacturer in case of problems.

## Connect a DV or HDV camera

MAGIX [Movie](#)

Edit Pro 16 supports continuous editing of DV (digital video) files. You will require a DV recorder or DV camera with an IEEE-1394 interface (also known as FireWire or iLink) as well as an OHCI-standard IEEE-1394 host adapter for your PC. You must also have Microsoft's DirectX8.a (or higher) installed.

- Connect the digital output of the switched-off camera with the computer's DV interface (also called FireWire or iLink).
- Insert a DV cassette or the storage device into the camera.
- Switch your camera's operating mode to "Video recorder" or "Playback".

The camera is now ready to transfer the video to the computer.

**Note:** You may also use a HDV camera in DV mode to, for example, transfer recordings in the old DV format. We have noted problems with this mode in many cameras, and therefore recommend that the

### Record mode

of the camera is also switched to DV, switching the camera off and then on again.

## Connect analogue video source

Connect the video out of your camcorder, or DVD/VHS recorder to the video in (TV, video, or video graphics card) of your computer, and the [audio](#)



out to the line in of your sound card.

Due to the variety of device configurations, it is difficult to say which cable will function best with your setup. If you're not sure, check the manual of your VCR or your TV, video, or graphics cards.

**Example**

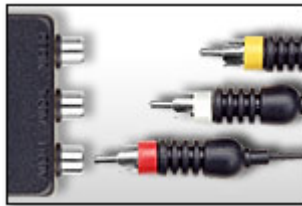
:

**Europe**

: Many VCRs and DVD players have a SCART, 3 RCA (2 for stereo sound, 1 for video), or S-Video/optical audio line out. In such case, you will need a SCART to RCA adapter, a cable with 3 RCA jacks, or an S-Video cable.

**North America**

: Many VCRs and DVD players have a 3 RCA (2 for stereo sound, 1 for video), or S-Video/optical audio line out. In such case, you will need a cable with 3 RCA jacks, or an S-Video cable.



**SCART/Cinch adapter   SCART/Cinch adapter   Stereo RCA/mini phone  
with 3 RCA jacks   jack adapter**

Most sound card inputs are 3.5 mini stereo jacks. To connect the VCR audio out to the sound card audio in you will need a stereo RCA/ mini phono plug adapter.

You will most likely have to buy a cable with 3 RCA plugs and a stereo cinch/mini jack adapter from your local supplier.

## Connect AVCHD camera (Plus version)

### [AVCHD](#)

cameras are available in basically three types:

- **Cameras with removable storage:** The camera includes a slot for a memory card. Your computer should feature a card reader for the associated medium so that you can simply insert the card from the camera and import the desired material. Different camera models can be connected via USB.
- **Cameras which burn DVDs directly** (usually 80 mm diameter instead of the regular 120 mm): The DVD can simply be taken out of the camera and inserted into the computer. For so-called "Slot in DVD" drives, look beforehand in the operational manual whether or not 80 mm DVDs (also called 3" DVDs or MiniDVDs) are acceptable.

### Note

: These variants require a special UDF driver (normally included with the camera) to be installed before the DVDs or removable storage can be imported into Windows.

- **Cameras with built-in hard drives:** The camera is preset as a drive as soon as the USB cable is connected to the PC. This additional drive is then visible in the Media Pool. A separate UDF driver doesn't usually need to be installed.

### Note

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### MAGIX [Movie](#)

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- Connect the digital output of the switched-off camera with the computer's DV interface (also called FireWire or iLink).
- Insert a DV cassette or the storage device into the camera.
- Switch your camera's operating mode to "Video recorder" or "Playback".

The camera is now ready to transfer the video to the computer.

**Note:** You may also use a HDV camera in DV mode to, for example, transfer recordings in the old DV format. We have noted problems with this mode in many cameras, and therefore recommend that the

### Record mode

of the camera is also switched to DV, switching the camera off and then on again.

## Connect analogue video source

Connect the video out of your camcorder, or DVD/VHS recorder to the video in (TV, video, or video graphics card) of your computer, and the [audio](#) out to the line in of your sound card.

Due to the variety of device configurations, it is difficult to say which cable will function best with your setup. If you're not sure, check the manual of your VCR or your TV, video, or graphics cards.

### Example

:

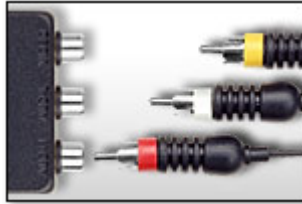
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S-Video/optical audio line out. In such case, you will need a SCART to RCA adapter, a cable with 3 RCA jacks, or an S-Video cable.

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**SCART/Cinch adapter**

**SCART/Cinch adapter  
with 3 RCA jacks**

**Stereo RCA/mini phone  
jack adapter**

Most sound card inputs are 3.5 mini stereo jacks. To connect the VCR audio out to the sound card audio in you will need a stereo RCA/ mini phono plug adapter.

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## Connect a DV or HDV camera

MAGIX [Movie](#)

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- Insert a DV cassette or the storage device into the camera.
- Switch your camera's operating mode to "Video recorder" or "Playback".

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### Record mode

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Due to the variety of device configurations, it is difficult to say which cable will function best with your setup. If you're not sure, check the manual of your VCR or your TV, video, or graphics cards.

### Example

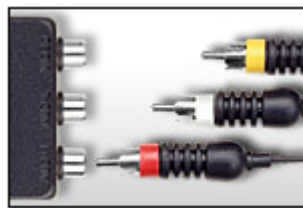
:

#### Europe

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#### North America

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**SCART/Cinch adapter**   **SCART/Cinch adapter with 3 RCA jacks**   **Stereo RCA/mini phone jack adapter**

Most sound card inputs are 3.5 mini stereo jacks. To connect the VCR audio out to the sound card audio in you will need a stereo RCA/ mini phono plug adapter.

You will most likely have to buy a cable with 3 RCA plugs and a stereo cinch/mini jack adapter from your local supplier.

## Connect analogue video source

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Due to the variety of device configurations, it is difficult to say which cable will function best with your setup. If you're not sure, check the manual of your VCR or your TV, video, or graphics cards.

### Example

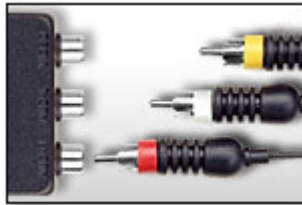
:

#### Europe

: Many VCRs and DVD players have a SCART, 3 RCA (2 for stereo sound, 1 for video), or S-Video/optical audio line out. In such case, you will need a SCART to RCA adapter, a cable with 3 RCA jacks, or an S-Video cable.

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**SCART/Cinch adapter**   **SCART/Cinch adapter with 3 RCA jacks**   **Stereo RCA/mini phone jack adapter**


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You will most likely have to buy a cable with 3 RCA plugs and a stereo cinch/mini jack adapter from your local supplier.

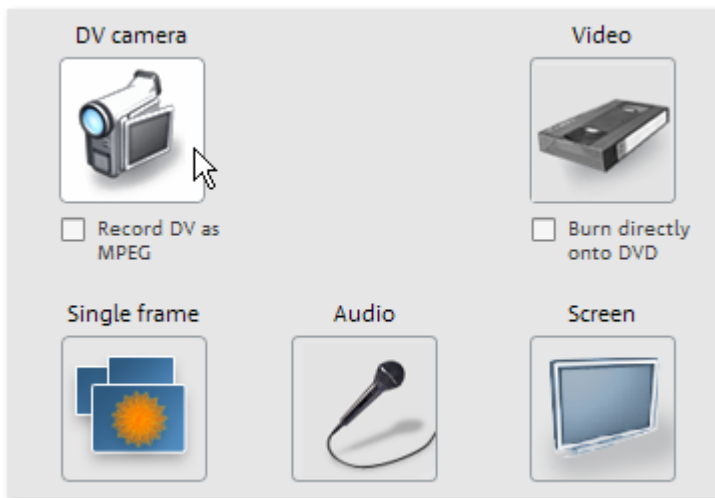
# Select the recording method

First, you should find out the correct recording method for your camera. The following options are basically available:

- Analog transfer: Transformation of the analog signal into a digital data current, whereby the actual video file is then created using the settings (Super 8, Hi8, (S)VHS, video recorder, and other analog sources).
- Digital transfer (DV camera, HDV camera)
- Copy the finished video files from a storage medium or directly from the connected camera to the local hard drive for [AVCHD](#) cameras, DVDs (without copy protection), DVD cameras with built-in hard drive or removable storage. Next, import the copied file into the [project](#).

 To start recording, click on the "Record" [button](#) under the source monitor.

The following selections are possible:



- **DV camera:** For mini DV cameras and DV video recorders
- **HDV camera:** For HDV1 and HDV2 cameras
- **Video:** For analog video cameras, TV, analog TV, VHS recorders (video input), webcams
- **Single [frame](#):** For single and series images from analog cameras, analog TV, or VHS recorders,

webcams, etc.

- [Audio](#): For microphones, cassette recorders, MiniDisc players, turntables, etc.
- **Screenshots**: Records directly from the computer monitor.

# DV cameras




## DV devices

MAGIX [Movie](#)

Edit Pro 16 supports continuous editing of DV (digital video) files. You will require a DV camcorder or DV recorder with an IEEE 1394 interface (also known as FireWire or iLink) as well as an OHCI conforming IEEE 1394 host adapter for your PC.

To record digitally, the digital output of the Mini DV camcorder or DV video recorder must be connected to the DV interface of the PC, but remain switched off. You must also have Microsoft's "DirectX8.a" (or higher) installed. Now switch your camcorder to "video recorder" or "playback" (according to your particular device) and open the DV capturing [dialog](#)

## Capturing DV recorders or cameras

 To start recording, click the "Record" [button](#) under the source monitor.

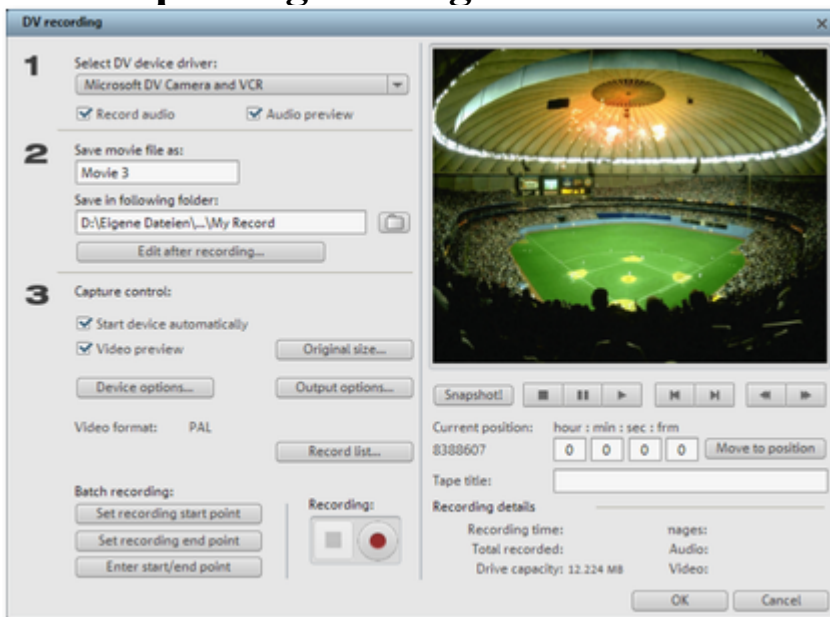
- Select "DV camera" from the recording [dialog](#). Uncompressed DV capture requires approx. 220 MB per minute of video. If you would instead like to record using the more space-saving [MPEG](#) format, then you should first activate the "Record DV as MPEG" option.



- This opens the actual recording dialog. Check to see if a DV camera driver has been selected.
- Name your recording. It's worth choosing a logical name which will allow you to find it easily again on the hard drive.
- You can access the appropriate place on the camcorder tape by using the remote control buttons: shuttle forwards, backwards, and start/stop playback. To start recording, click on the "Record" [button](#). Keep an eye on the remaining hard-drive space.
- Cease capturing with the "Stop" button and exit the record dialog. You can see the recording in the film-strip in the lower third of the screen.

**Tip:** In the DV recording dialog, you can set clips from the DV video which will then be recorded one after the other (batch capturing). Read more on this in the chapter ["Batch processing"](#)

## "DV capturing" dialog



### Note

: Keep an eye on the available hard drive space before each recording. DV capture requires approx. 220 MB per minute of video!

**Select DV device driver:** The device driver for your DV device should be listed here. If "[Audio recording](#)" is deactivated, then only video without sound is recorded. "Audio preview" activates the audio output of the recording.

**Note:** The [audio](#)

preview is deactivated at first, since DV cameras usually include built-in speakers.

**Save video file as/save in following folder:** Enter the name of the [movie](#) to be recorded. You can also select the folder where you wish to store your video file. The default recording directory is set by default, but you can change the [Path settings](#) settings under [menu](#) item "File -> Program settings -> Path settings".

### Edit after recording

: This provides access to the automatic editing options.

**Start device automatically:** Starts the DV recorder or DV camera automatically when the "Record" [button](#)

is pressed. This does not function with all digital cards/video devices.

**Movie preview:** On the preview monitor you can see a preview of your [movie](#)

**Original size:** This option allows you to preview the video in the original size. To return to the [dialog](#) use the "Esc" key.

**Automatic capturing:** Here the start and end points can be set for the capturing. This allows you to search the entire video for all captures to be used and list them for planned batch capture. This is then processed in sequence when the recording starts (via the red [button](#)). That way you don't need to record each [scene](#) individually. You simply determine recording time points, and the computer takes care of the rest. To set the start and end points precisely, click "[Enter start/end point](#)"

**Recording list:** Use this [button](#)

to view the available list of already recorded videos and scheduled recordings. All entries from the list can be selected and deleted.

### Record

: Starts the recording process. Also contains the list of scheduled recordings. These are processed

step-by-step (batch capturing).

### Stop

: Stops the recording process.

**Snapshot!** With the Snapshot! [button](#), you can create a frozen [image](#) directly from the preview monitor.

Start the camcorder and watch the preview window. When the image you want appears, click "Snapshot". Or you can navigate using the remote control to the position you want, and stop there in

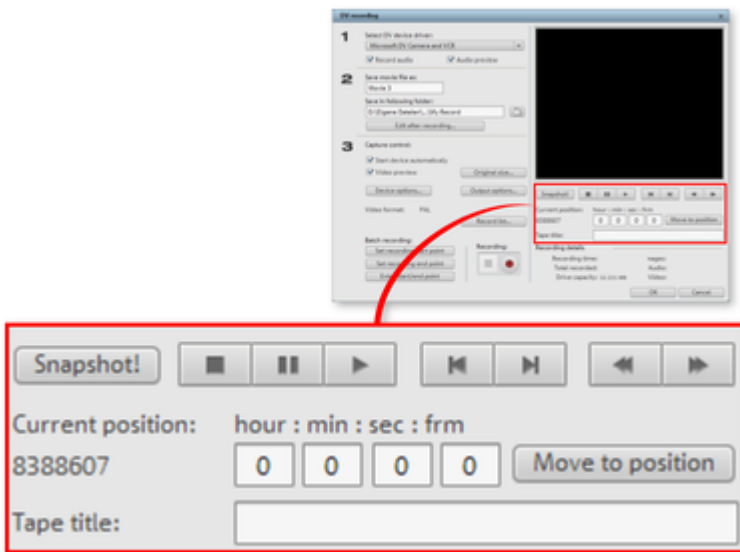
**Pause mode**. Stopped playback on the DV camera will not deliver an [image](#)

! The images are saved in the record directory as graphics files in the set resolution.

**Remote control**: Digital camcorders can be controlled remotely. This does not function with all digital cards/video devices. If your [hardware](#)

does not support the remote control function the buttons will not be usable.

The transport buttons required for this are in the DV or HDV recording [dialog](#)



**Tape name**: Enter a name for your tape here. MAGIX [Movie](#)

Edit Pro 16 requires this name for the DV logging feature.

### Recording information

: Displays various information about your recordings.

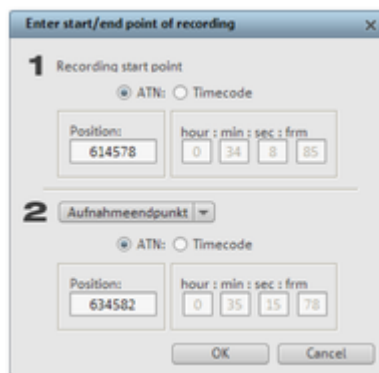
### Enter start/end point

:

Enter the exact start and end point or the recording length for a [scene](#)

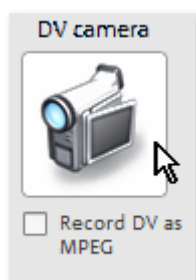
Both values can be entered as ATN (absolute track number) or as a timecode in

*hours:minutes:seconds:frames*



# DV as MPEG

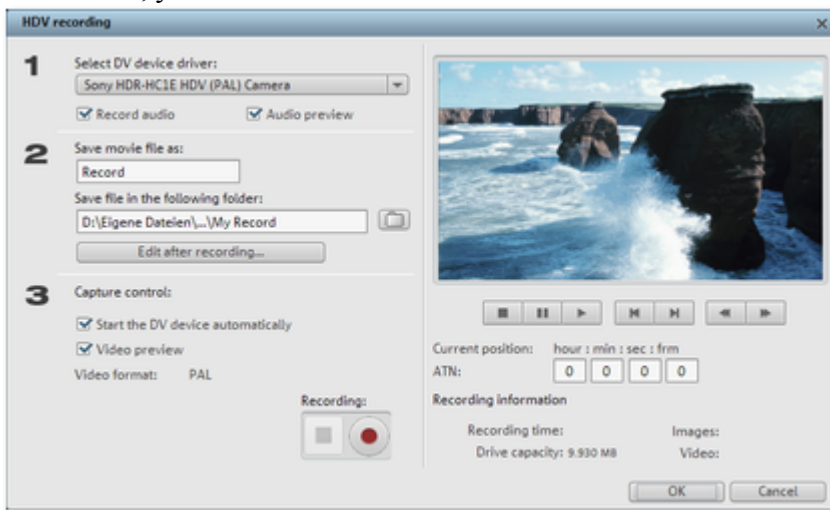
The "Recording selection" [dialog](#) option allows you to transfer DV recordings directly into the space-saving [MPEG](#) format on the [hard disk](#)



The "Enhance" [button](#) presents the MPEG encoder settings options. You can also burn your DV material directly to disc without taking any intermediate steps.

# HDV camera

Use this option to open the "HDV camcorder recording" [dialog](#). To do this, you have to connect an HDV 1 or HDV 2 camcorder.



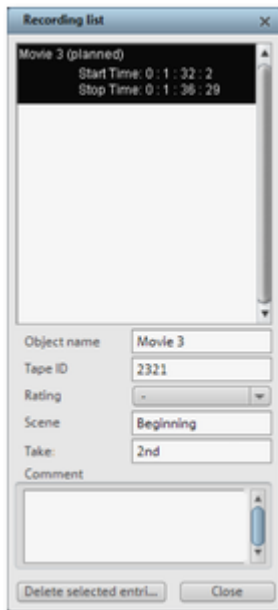
The options in this [dialog](#) can also be found above in DV recording.

# Batch recording

Set the start and end points for the capture here. This allows you to search the entire video for all captures to be used and then list them for planned batch capture. This is then processed in sequence when the recording starts (via the red [button](#)). That way, you don't need to record each [scene](#) individually. You simply determine recording time points, and the computer takes care of the rest. To set the start and end points precisely, click "[Enter start/end point](#)".

**Recording list:** Use this [button](#)

to view the available list of already recorded videos and scheduled recordings. All entries from the list can be selected and deleted.



The basis for batch recording is the recording list in the DV recording, DV to [MPEG](#) recording, or HDV recording's recording [dialog](#). All recordings listed there are "logged". Recordings for which the corresponding video material is no longer on the [hard disk](#) will appear as "planned recordings". Click the red record button to move all video files back to the hard disk.

# Logging

Logging means that MAGIX [Movie](#) Edit Pro 16 also saves the original position and additional information (metadata, e.g. [scene](#), take, rating, comments, etc.) about DV video and [audio](#) files.

If it does not find the corresponding DV and [WAV](#)

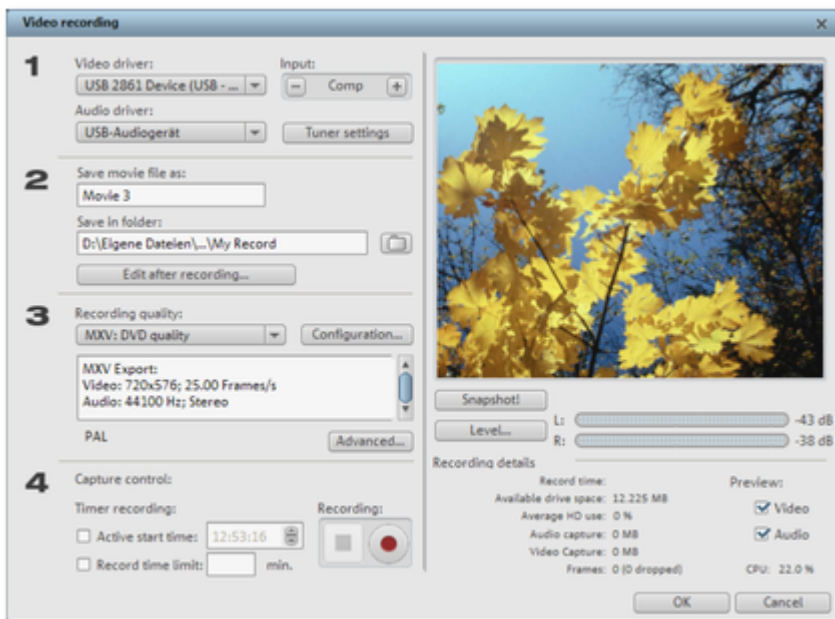
files during the loading of a video, it will ask that the corresponding DV tape is inserted into the connected camcorder again for automatic scene import.

You no longer have to save DV [AVI](#) and audio files (which can be very large). If at a later time you would like to work on a film again, but do not have the space to keep the material for it on your [hard disk](#)

, then you can simply delete the bulky DV AVI and audio files.

The basis for the log is the recording list in the DV recording, DV to [MPEG](#) recording, or HDV recording's recording [dialog](#). All recordings listed there are "logged". Recordings for which the corresponding video material is no longer on the hard disk will appear as "planned recordings". Click the record [button](#) to move all video files back to the [hard disk](#)

# Record dialog analog video recording



**Video/Audio driver:** Here you can set up the video card or sound card for recording. In practically every case, the driver [software](#) supplied with the [hardware](#) must be installed.

**Hint:** Under "video driver", you will find a "screen capture" entry in the Plus version. Read more about how it functions in the chapter [Screen \(Plus version\)](#)

#### **Input/Tuner settings:**

If your video capture card supports multiple sources, i.e. your card also has a TV tuner or multiple inputs (SVHS, composite, etc.), then you can select the proper recording source and the TV channel to be recorded here.

**Save video file as / Save in following folder:** Enter the name of the [movie](#) to be recorded here. You can also select the folder where you wish to store your video file. The standard record folder is set as default. The location of this folder can be changed in [Path settings](#) by going to "File -> Program settings -> Path settings".

#### **Edit after recording:**

Use this to access the automatic editing options.

**Recording quality:** You can select from a variety of predefined quality levels from the list box. They are listed according to picture quality. Using **Configuration** you can fine tune the quality for the selected preset.

Presets displayed with "[MPEG](#)" record directly in MPEG format.

#### **Tip:**

Use the presets marked MPEG if you want to burn your recordings straight away, since smart encoding can omit laborious encoding after recording.

**Advanced...:** Opens the [video driver settings dialog](#)

#### **Capture control:**

Here you'll find the "Red" record and "Stop" buttons. These start and stop recording.

#### **Timer recordings active/time limit:**

Specify a recording start time and length here to transform your PC into a fully functioning VCR.

#### **Snapshot!:** Use the "Snapshot" [button](#) to create a still [image](#)

directly from the preview monitor. The images are saved in the record directory as graphics files in the set resolution.

#### **Recording information:**



This shows statistical information such as the recording time, available space on the hard drive, the recorded frames, and the "dropped" frames. Dropped frames are frames that have been left out because the computer processor is too slow for the selected image format and cannot accept all incoming frames. **Preview:** Some graphics adapters allow you to reduce the system lead by deactivating the video preview. If you hear an "echo", deactivate the [audio](#) preview.

# Logging

Logging means that MAGIX [Movie](#) Edit Pro 16 also saves the original position and additional information (metadata, e.g. [scene](#), take, rating, comments, etc.) about DV video and [audio](#) files.

If does not find the corresponding DV and [WAV](#)

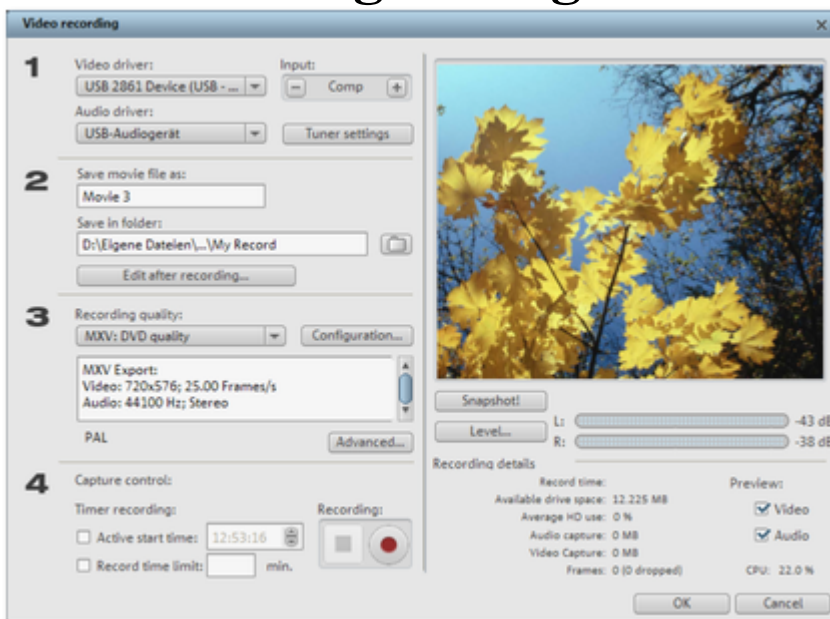
files during the loading of a video, it will ask that the corresponding DV tape is inserted into the connected camcorder again for automatic scene import.

You no longer have to save DV [AVI](#) and audio files (which can be very large). If at a later time you would like to work on a film again, but do not have the space to keep the material for it on your [hard disk](#)

, then you can simply delete the bulky DV AVI and audio files.

The basis for the log is the recording list in the DV recording, DV to [MPEG](#) recording, or HDV recording's recording [dialog](#). All recordings listed there are "logged". Recordings for which the corresponding video material is no longer on the hard disk will appear as "planned recordings". Click the record [button](#) to move all video files back to the [hard disk](#)

## Record dialog analog video recording



**Video/Audio driver:** Here you can set up the video card or sound card for recording. In practically every case, the driver [software](#) supplied with the [hardware](#) must be installed.

**Hint:** Under "video driver", you will find a "screen capture" entry in the Plus version. Read more about how it functions in the chapter [Screen \(Plus version\)](#)

### Input/Tuner settings:

If your video capture card supports multiple sources, i.e. your card also has a TV tuner or multiple inputs (SVHS, composite, etc.), then you can select the proper recording source and the TV channel to be recorded here.

**Save video file as / Save in following folder:** Enter the name of the [movie](#) to be recorded here. You can also select the folder where you wish to store your video file. The standard record folder is set as default. The location of this folder can be changed in [Path settings](#)

by going to "File -> Program settings -> Path settings".

**Edit after recording:**

Use this to access the automatic editing options.

**Recording quality:** You can select from a variety of predefined quality levels from the list box. They are listed according to picture quality. Using **Configuration**

you can fine tune the quality for the selected preset.

Presets displayed with "[MPEG](#)

" record directly in MPEG format.

**Tip:**

Use the presets marked MPEG if you want to burn your recordings straight away, since smart encoding can omit laborious encoding after recording.

**Advanced...:** Opens the [video driver settings dialog](#)

**Capture control:**

Here you'll find the "Red" record and "Stop" buttons. These start and stop recording.

**Timer recordings active/time limit:**

Specify a recording start time and length here to transform your PC into a fully functioning VCR.

**Snapshot!:** Use the "Snapshot" [button](#) to create a still [image](#)

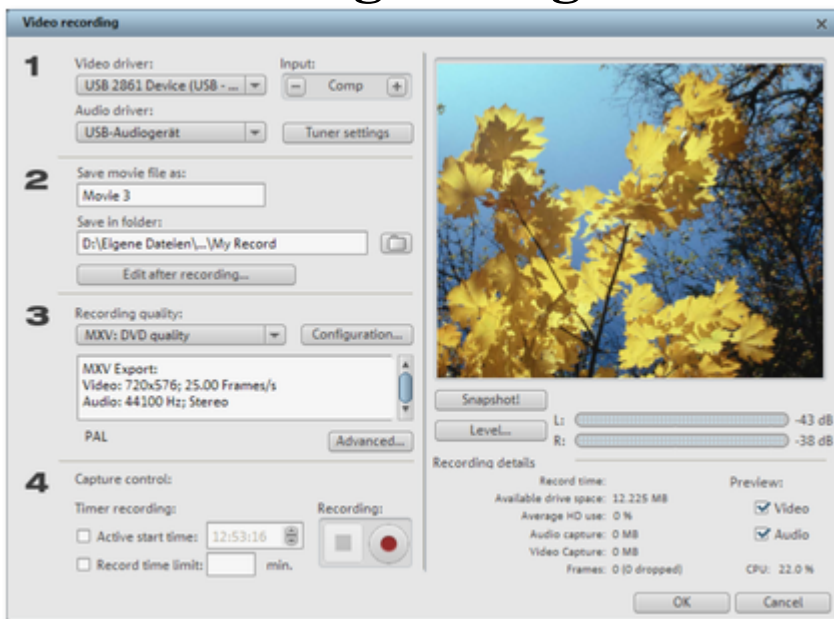
directly from the preview monitor. The images are saved in the record directory as graphics files in the set resolution.

**Recording information:**

This shows statistical information such as the recording time, available space on the hard drive, the recorded frames, and the "dropped" frames. Dropped frames are frames that have been left out because the computer processor is too slow for the selected image format and cannot accept all incoming frames.

**Preview:** Some graphics adapters allow you to reduce the system load by deactivating the video preview. If you hear an "echo", deactivate the [audio](#) preview.

# Record dialog analog video recording



**Video/Audio driver:** Here you can set up the video card or sound card for recording. In practically every case, the driver [software](#) supplied with the [hardware](#) must be installed.

**Hint:** Under "video driver", you will find a "screen capture" entry in the Plus version. Read more about how it functions in the chapter [Screen \(Plus version\)](#)

## Input/Tuner settings:

If your video capture card supports multiple sources, i.e. your card also has a TV tuner or multiple inputs (SVHS, composite, etc.), then you can select the proper recording source and the TV channel to be recorded here.

**Save video file as / Save in following folder:** Enter the name of the [movie](#) to be recorded here. You can also select the folder where you wish to store your video file. The standard record folder is set as default. The location of this folder can be changed in [Path settings](#) by going to "File -> Program settings -> Path settings".

## Edit after recording:

Use this to access the automatic editing options.

**Recording quality:** You can select from a variety of predefined quality levels from the list box. They are listed according to picture quality. Using **Configuration** you can fine tune the quality for the selected preset.

Presets displayed with "[MPEG](#)" record directly in MPEG format.

## Tip:

Use the presets marked MPEG if you want to burn your recordings straight away, since smart encoding can omit laborious encoding after recording.

**Advanced...:** Opens the [video driver settings dialog](#)

## Capture control:

Here you'll find the "Red" record and "Stop" buttons. These start and stop recording.

## Timer recordings active/time limit:

Specify a recording start time and length here to transform your PC into a fully functioning VCR.

**Snapshot!:** Use the "Snapshot" [button](#) to create a still [image](#)

directly from the preview monitor. The images are saved in the record directory as graphics files in the set resolution.

**Recording information:**

This shows statistical information such as the recording time, available space on the hard drive, the recorded frames, and the "dropped" frames. Dropped frames are frames that have been left out because the computer processor is too slow for the selected image format and cannot accept all incoming frames.

**Preview:** Some graphics adapters allow you to reduce the system lead by deactivating the video preview. If you hear an "echo", deactivate the [audio](#) preview.

## Advanced configurations in the video capturing dialog

Here you can adjust certain settings for the video recording driver.

These [dialog](#)

boxes, so-called "property sheets," come with the video card drivers. These driver-specific performance properties may deviate depending on the cards. We also have a very limited influence on the behavior of these drivers. If you encounter any difficulties, please contact the video card manufacturer for the latest driver updates.

### Input

: Sets the crossbar of the video card.

The crossbar determines which video and [audio](#) input signal will be recorded. The crossbars are connected in series to the video recording chip itself. In the output [field](#), the video *output* (for the crossbars) is the *input* for the recording chip (video or audio decoder-in) of the video card. In the "Input" field, select the signal source that will be used by the video card to capture for this input. Many video cards have separate crossbars for audio and video. If you have a problem, try out the different configurations until the right sound matches the right [image](#)

Composite-in = the normal video input (typically a cinch jack)

S-video = S-video input (mini-din jack)

SVHS-in = SVHS input (special cable)

Tuner-in = TV signal of the integrated tuner

### Imagesetting

**Video decoder:** If the picture only appears in black & white or it flickers, the video standard may be set incorrectly. In mainland Europe, **PAL\_B** is used.

### VideoProcAmp

: Fine-adjustment of colors, brightness, contrast etc. We recommend against changing any of the manufacturer's settings.

### Format

: Please do not change anything here. The capturing format is set in the "Recording quality" option in the video recording dialog.

### Station selection

This option is only available if a TV tuner is integrated into your video card.

# Single frame

The single-frame recording function lets you record snapshots directly from the connected video source.

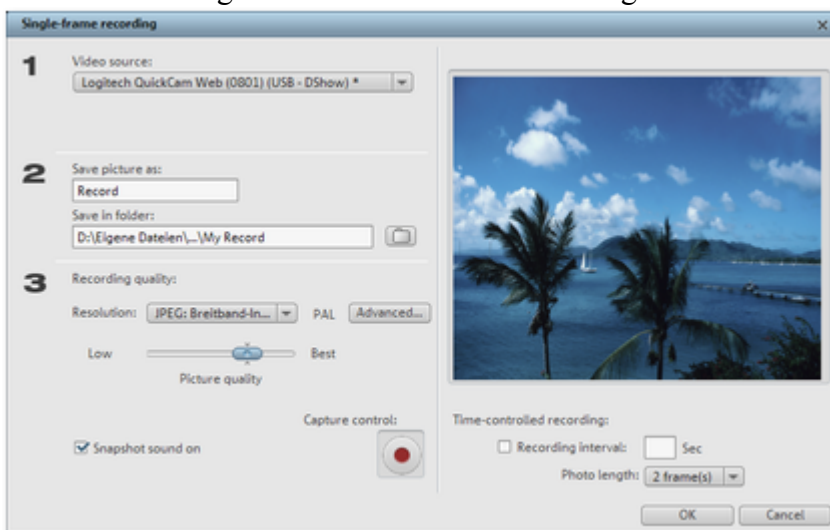
This requires either a video clip [compatible](#)

with DirectShow, a TV card, or a USB device such as a webcam.

The time control function allows you to automatically take snapshots. Here are just a few examples of where it might be used:

- for creating photo stories from videos
- for animated films (stop-motion animation)
- for video surveillance
- or for time-lapse photography

The recorded images are added to the current arrangement.



## Video source:

Sets the video card to be used to take pictures.

## How would you like to name the recorded JPEG file?:

Enter the title of snapshots you are about to record. They are saved under this name and numbered consecutively. You can also select the file path for storage.

**Resolution:** The resolution of the recording is defined here. It corresponds to the resolution options offered on the camera. The [slider](#) lets you set the [image](#) quality. Using higher resolutions results in larger file sizes for each recording; moving the slider in the opposite direction sets the image quality back to the preset value.

**Advanced...:** Opens the video driver settings [dialog](#)

## Camera noise during recording:

You can make the program play a clicking sound each time a snapshot is taken.

## Recording:

The red "Record" [button](#) triggers a snapshot or alternatively a series of recordings when using the time control function.

## **Time control**

### **Photo length in frames**

: Specifies how long the photos appear in the slideshow.

### **Interval**

: When this function is activated, a series of images is made once the recording has started. Snapshots are automatically saved and numbered consecutively at a preset time interval.

For example, if you specify a two-second interval between shots and that each shot be added at a length of 5 frames to the slideshow, then the end result is a time-lapse recording at 10x normal speed.



## Enhanced single-frame recording dialog settings

You can adjust certain settings for the video recording driver.

These [dialog](#)

boxes, so-called "property sheets", come with the video card drivers. The driver-specific features may slightly vary from driver to driver. The MAGIX team has little direct influence on the performance of the various drivers. If you encounter any difficulties, then please contact the video card manufacturer for the latest driver updates.

**Input:** Sets the crossbar switch of the video card. This lets you define what video and [audio](#) signal is used in the recording. The crossbars are connected in series to the video recording chip itself.

**Output:** In the "Output" [field](#), the video output (for the crossbars) is the input for the recording chip (video or audio decoder in) of the video card. In the "Input" field, you select the signal source to be used for this input by the video card during recording.

Composite in = the normal video input (typically a cinch jack)

S-VHS in = S-VHS input (special cable)

Tuner in = the TV signal of the built-in tuner

### **Video decoder**

: If the picture only appears in black & white or it flickers, then the video standard may be set incorrectly. PAL\_B is used in Germany and most European countries (France: SECAM; US/CAN: NTSC).

### **VideoProcAmp**

: For fine tuning of colors, brightness, contrast, etc. We recommend against changing any of the manufacturer's settings.

### **Format**

: Do not change anything here! The capture format settings can be changed under "Resolution" in the "Recording" dialog box.

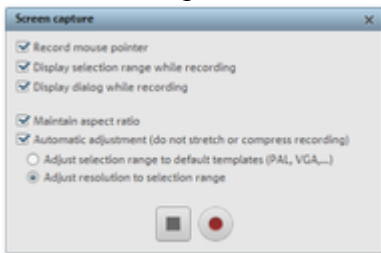
# Record screen contents (Plus version)

Use this function to record everything that moves on your monitor. This process is called "screen capturing".

- Under "Recording quality", you will find various presets for different applications. You can either record the entire monitor ("fullscreen"), a [frame](#) of variable size (e.g. to film the Windows Media Player display), or a different video player. Click on "Configuration" to make custom size adjustments.

**Hint:** Because many video players work with overlay, it is recommended to open each player **before** starting the capture! This way switching into "Overlay" mode can be prevented.

- Click the "Record" [button](#) in the recording [dialog](#). A small dialog with a red record [button](#), a black stop button as well as a frame with dashed bordering appears. Activate the option "Record mouse pointer" to record the movements of the mouse pointer.

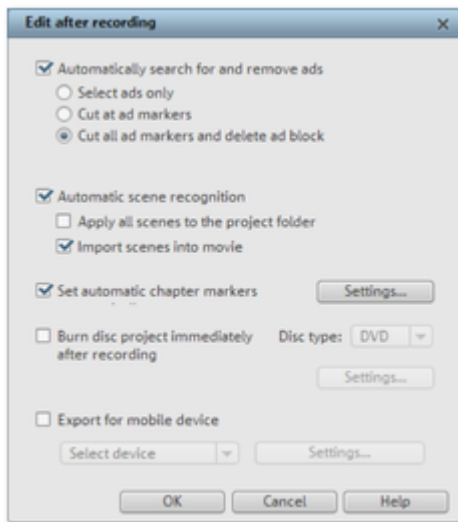


- Now select the screen area you wish to record, i.e. the screen of the video player in which the video is playing. Drag the frame over the area you wish to record and adjust its size as required by dragging the edges and corners.



- The actual recording process can be started by pressing the red "Record" button. The recording starts; the record symbol appears in the task bar (tray).
- Once the video you wanted to record has come to an end, click on the "Record/Stop" button to stop the recording. Recording ends and the recording dialog is visible once again.

# Edit after recording



The "Edit after recording" [dialog](#)

can be opened from all recording dialogs.

All editing steps from recording to automatic burning can be carried out without further user involvement.

In the "Edit after recording" dialog you can:

- Automatically search for and remove ads. For more on this please read the "[Automatically search for and remove ads](#)" section in the PDF manual.
- Split up the material into scenes. Please read the "[Automatic scene recognition](#)" section for more on this in the PDF manual.
- Set automatic chapter markers. Please read the "[Set chapter markers automatically](#)" section in the "Edit [menu](#)" chapter in the PDF manual.

## **Burn disc immediately**

: You can use this option to record and burn in a single step. Simply select the format you would like to burn, insert a suitable blank disc into the drive, and then press record.

**Note:** Make sure that the selected recording quality corresponds with the disc type (e.g. the preset "[MPEG](#)

DVD" for DVDs)!

If you use your own settings for MPEG encoding (e.g. half [image](#) resolution for long-play DVDs), then make sure that the settings for recording and later for burning are the same so that no new recording is necessary (Smart encoding).

After recording, the program automatically switches to the "Burn" screen, the burn window opens, and the disc is burned. The last set layout is used for the menu layout for the DVD.

## **Tip**

: This function is particularly suitable for burning lengthy disc projects directly to disc, since you can start recording in the evening and have the finished DVD by morning.

**Export for mobile device:** The recorded [movie](#) is immediately converted into the format of the selected mobile device and transferred onto the device. The list [field](#) contains the device which has been selected in the "[Export video/audio](#)

" dialog.

**Settings:** Opens the [export settings](#) for the selected target device.

## **Hint**

: If you enter a file name and memory path in the export dialog, then the path is used but the file name is ignored. For EPG-controlled TV recordings the name of the program is used instead.

# Audio

Songs, noises, or instruments can be easily recorded in MAGIX [Movie](#) Edit Pro 16 using the [audio](#) recording function. A hooked-up microphone or various audio devices (especially a stereo system) can be used as recording sources.

## Connecting the source for recording

First of all, the source of the [audio](#) material must be connected to the sound card input. Again, there are several possibilities which primarily depend on the type of equipment you have.

If you want to record material from a stereo system, then you can use the line-out or AUX out jacks on the back of your amplifier or tape deck. This involves connecting them to the sound card input (usually red).

If your amplifier has no separate output (other than for the speakers), then you can use the connection intended for headphones for your recordings. In most cases, you will need a cable with two mini-stereo jacks. This type of connection has the advantage of being able to set the headphone input signal level with a separate volume. As headphone connections generally are not the best, it is advised that you use the line outputs if possible.

When recording cassettes from a tape deck, you can connect the tape deck's line out directly to the sound card input.

When recording from vinyl records, you should not connect the record player's output directly with the sound card because the phono signal needs to be pre-amplified. A more suitable method would be to use the headphone connection or an external pre-amp.

If you are recording from a microphone, then please connect the microphone to the microphone jack on your sound card (usually red).

## Adjusting the signal level

Adjusting the signal level to the sound card is also recommend to get the best sound quality during digital recording.

Once a recording source is connected to the sound card, the "Record" [button](#) opens the recording [dialog](#) and starts the recording source.

You can now adjust the recording level with the help of the LED display in the recording dialog. For this, you must first check off "Show levels".

If the adjustment is set too high, distortion occurs and the incoming signal must be reduced. If you have connected the source through either an amplifier or tape deck output to the sound card, you can only reduce the signal level in your sound card's [software](#) mixer interface. You can access the mixer directly from within the recording dialog via the "Recording level" [button](#)

If you reduce input sensitivity by using the input [fader](#), the resolution at which the analog signal is digitized is also reduced. Try to set these automatic controllers to the loudest sound level possible!

The maximum setting for an optimal level is the loudest part of the material. The loudest part should be adjusted to be the maximum. The actual recording begins when you press the "Record" button. At the end of the the recording you will be asked if you want to use the recording. Upon confirmation, the newly-recorded material will be placed in the next free track at the position of the start maker in the arrangement.

## "Audio record" dialog



### Audio driver:

Selects the sound card for the recording.

### **Save audio file as/ save in the following folder:**

Here you can select the title of the audio file you wish to record. You can also select the folder where you wish to store the file.

Recording quality: Sets the sound quality of the recording. In the preset [menu](#) you can choose between medium [wave](#)

radio ("AM tuner"), UKW ("FM Radio"), DAT (Digital Audio Tape) and CD quality.

**Peakmeter (Monitor):** Using the peakmeter, you can monitor the level of the incoming signal. Please read more on this in the chapter ["Adjusting levels"](#)

**Recording:** This [button](#) starts the actual recording.

**Stop:** Click this [button](#) to stop recording

**Normalize after recording:** With this option activated, your material's volume is raised to a proper level after recording is completed. In order to achieve good results, you should try to record the source as loud as possible without overmodulating it. To do so, refer to the peak meter reader in the recording [dialog](#)

**Playback while recording:** This option is particularly important for spoken commentary, etc. If activated, the selected [movie](#) (or selected [scene](#) if recorded in the "Edit" screen) is played while recording. This acts as orientation for the movie.

**Advanced:** Use this [button](#)  
to open a window where you can select from special features:



## Advanced options

- "Mono" creates a mono recording and requires half of the hard drive space required for stereo.
- "Real-time sample rate adjustment" automatically matches the sample rate of a new file to be recorded with the sample rate of the selected [movie](#) sound track.
- "Ducking" (reducing the sound volume): To add narration or other sound material to a video that already has sound volume levels set, activate the option "Automatic reduction of sound volume of remaining [audio](#) tracks". This automatically reduces the volume of audio objects in the arranger during the recording session ("ducking"). A volume curve controls the whole process, produces the fading in and out of effects automatically and guarantees consistent overall volume.

# AVCHD recording (Plus version)

This recording is actually not really a recording as such, but rather "only" the transfer of the already created video file and its import into the existing [project](#)

## [AVCHD](#)

requires a special UDF driver (normally included with the camera) to be installed before the DVDs or removable storage can be imported into Windows. This isn't necessary for AVCHD cameras with built-in hard drives. The camera is preset as a drive as soon as the USB cable is connected to the PC. This additional drive is then visible in the Media Pool, and the corresponding M2TS files can be simply dragged from the list.

Files with the M2TS extension can easily be dragged down from the Media Pool (above right). You will be asked during the first import if you want to convert the [movie](#) into the [MPEG](#)

-2 format. You should definitely answer this question with "Yes", since only then will you be able to edit your movies in real time. We also recommend you activate the check box "Don't ask me again". The advantage is that you won't have to answer this query every single time you import individual files.

Switch on [hardware](#) acceleration, too (press "P -> Display options -> Playback in Arranger -> Video mode -> Direct3D hardware acceleration"). This lets you playback multiple tracks simultaneously with a modern graphics card (better than ATI Radeon 1300). Another advantage of converting to MPEG-2 is the option of using "smart encoding". The sound will be re-encoded to guarantee synchronicity of [image](#) and [audio](#)

. It is currently not possible to maintain 5.1 sound; this is automatically converted to MPEG stereo.

**Note:** Since AVCHD contains AVC (also called H.264), it is necessary to [activate](#) the MPEG-4 encoder. MAGIX Movie Edit Pro 16 offers this option as soon as the codec is required. The Dolby Digital Stereo decoder will also be required, since [AVCHD](#) files include Dolby Digital sound.

## AVCHD activation details

**Attention:** For [AVCHD](#) support, Dolby Digital Stereo and the MPEG-4 codec must be activated. To convert [AVCHD](#) videos to [MPEG](#)-2, the MPEG-2 codec must be activated.

# Import a non-copy-protected DVD

In case the record screen is open, switch into the Edit screen. This can be done using a double click on the desired [movie](#)

Click in the Media Pool under "Import" on "Computer" and select by double clicking the DVD drive where the DVD to be imported is located.

Now you can load the listed VOB files into the [project](#) as described in the "[Add objects into the project](#)" chapter. MAGIX [Movie](#)

Edit Pro 16 recognizes which files belong together, so that you only have to load one file.

# MAGIX Videorecorder

MAGIX [Movie](#)

Edit Pro 16 provides you with a PC-based TV and video recorder. A functional TV card/TV tuner box or DVB-T/S card is required to use MAGIX Videorecorder.

In this chapter

[Hook up TVs or other display devices](#)

[Buttons overview](#)

[VCR settings](#)

[Setup for DVB cards](#)

[Configure channels for analog reception](#)

[Channel list for analog programs](#)

[Channel list for DVB cards](#)

[TV program](#)

[Timer programming](#)

[Manual timer programming](#)

[Timeshift mode](#)

[Save recorded programs](#)

## Hook up TVs or other display devices

With MAGIX Videorecorder and other suitable TV cards/TV tuner boxes you can transform your PC into a TV. You can have your TV program displayed on devices connected to your computer like PC monitors, video projectors or TV devices. Simply connect up the desired output device to the VGA output (TV symbol) of your graphics card.

**Tip:**

When connecting video projectors to notebooks "No signal" may be displayed. In this case, switch to the VGA output of the laptop using the key combination Fn+Screen key.

# Buttons overview



- 1 **Reset to start view**
- 2 **Recording**
- 3 **Timeshift mode**
- 4 **Instant record**
- 5 **Favorites + Channel list**
- 6 **Switch back to previous channel**
- 7 **Switch to next channel**
- 8 **Mute**
- 9 **Turn down sound**
- 10 **Turn up sound**
- 11 **Hide/Show info area**
- 12 **Setup: Open settings [dialog](#)**
- 13 **Timer**
- 14 **Program: Electronic program guide (EPG)  
DVB TV guide or (MAGIX Online TV Guide).**
- 15 **Open recordings folder**

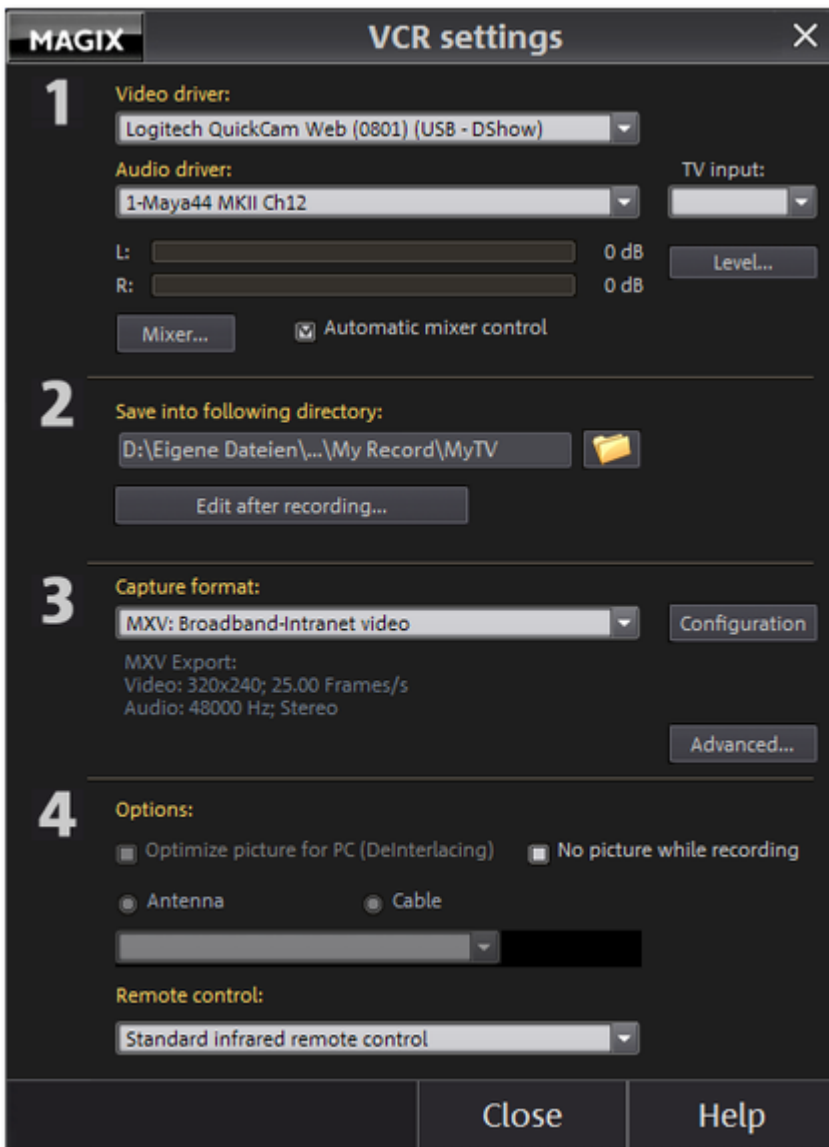


If you have opened the MAGIX Videorecorder directly, you can easily edit the program that you have just recorded using the main program.

# VCR settings



The [button](#) opens the settings [dialog](#) for the VCR.



**Video driver:** Configure the driver of your TV card here. You can also select DVB-S and DVB-T cards. In this case the dialog is replaced with a simpler version ([see below](#)).

## [Audio driver:](#)

Configure the audio driver of the sound card or the sound device you would like to use for recording and playing TV sound.

The peak meter indicates an existing audio signal. It is optimally calibrated if the loudest parts just reach 0 dB.

**Level:** Here you can open a level [fader](#) to customize the controls.

**Automatic mixer control:** Adjusts audio playback to the record status, i.e. you will hear the input signal while you are watching live TV. The [wave](#) output is muted. The line input is also automatically selected as

the recording source. Deactivate this option only if you want to use a different sound card input. With the **Mixer button** you can select the input manually.

**Save in the following folder:**

Select the folder to which you wish to save your video file. The standard recording folder (TV recordings) is set as the default folder.

**Edit after recording:**

This option opens the "Edit after recording" dialog. Read more on this in the chapter "Recording interface".

**Select record format:** Choose from different recording formats according to your needs, or define your own via "**Configuration**".

**Advanced** opens the special [settings options of the TV card](#)

. Please also observe the general information on TV formats.

**Optimize image for PC:** This option activates a special deinterlacing function for optimizing TV playback on your PC's screen. It is not supported by every graphics/TV card combination and in any case requires a DirectX-[compatible](#) graphics card driver.

**Cable/Antenna:**

Specify whether you are receiving the TV signal via cable or an antenna.

**No picture while recording:** To reduce the [CPU](#) load you can suppress output of the TV picture while recording.

## Remote Control

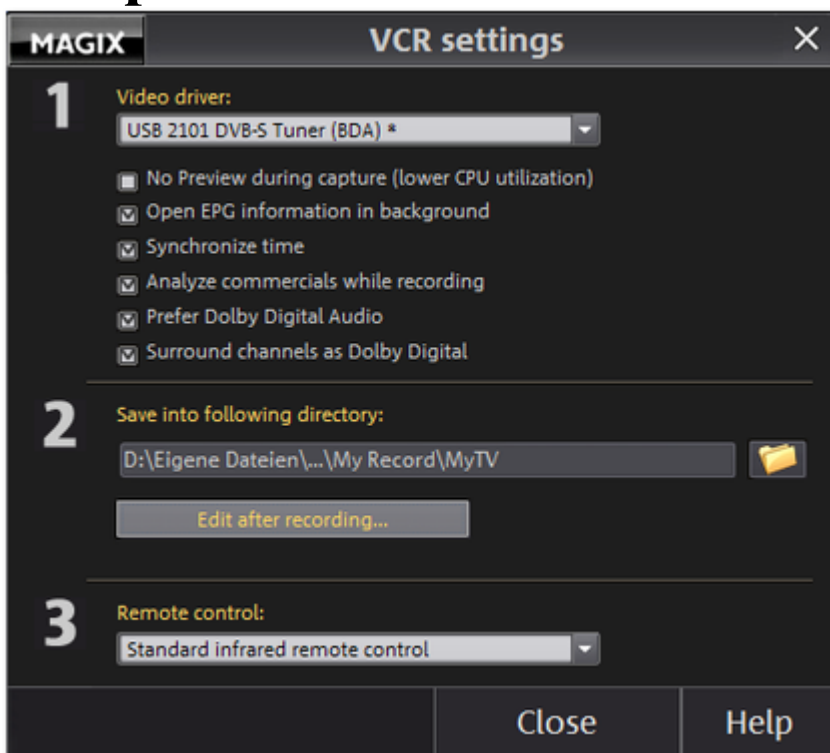
Here you will find a selection of remote controls from various manufacturers for controlling the MAGIX Videorecorder. If you find that you own none of the remote controls, simply try out various settings.

**Hint:** Some remote controls require that their reception [software](#) is running, otherwise they will not be recognized by MAGIX [Movie](#)

Edit Pro 16.



# Setup for DVB cards



## **No picture while recording:**

This option serves to free up processing power on your computer: Pictures will not be displayed while recording.

**Call up EPG information in the background:** EPG information is open in the background while you watch TV. Once you open the timer [dialog](#) for programming a recording, the information will be made available to you immediately.

## **Synchronize time:**

The system clock is synchronized with the DVB time.

## **Analyze commercials while recording:**

Commercials are recognized while recording. The programs are edited directly after recording (see dialog: Edit after recording).

## **Prefer Dolby® Digital Audio:**

If the channel offers Dolby® Digital sound in addition to the normal stereo sound, Dolby® will be chosen automatically.

To edit Dolby® Digital Audio in MAGIX [Movie](#)

Edit Pro 16 a Dolby® Digital codec has to be activated.

**Play Dolby® Digital in surround mode:** If you own a Dolby® Digital Surround sound stereo, you can playback all programs with 5.1 Surround sound on your system by choosing this option. First, make sure that the channel you've selected broadcasts in 5.1 format. To be able to receive the corresponding programs in 5.1 Surround, you must either select the "Prefer Dolby® Digital Audio" option, or select an Dolby®

Digital audio channel for the network in the advanced mode.

**Edit after recording:** This option opens the "Edit after recording" [dialog](#). Read more on this in the chapter "Recording interface".

## **Remote Control**

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Edit Pro 16.

# Configure channels for analog reception

For digital TV reception (DVB-T/S) MAGIX [Movie](#)

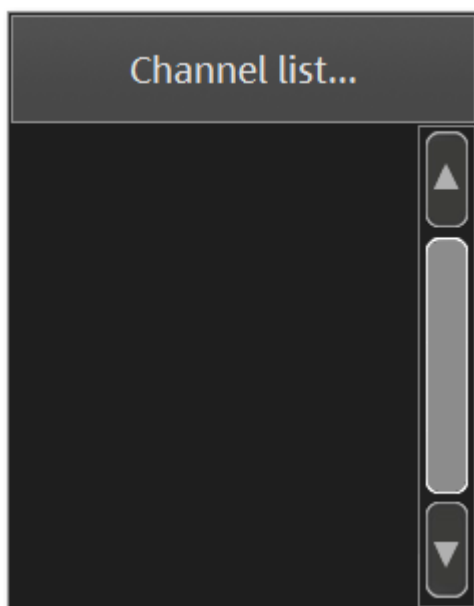
Edit Pro 16 is already equipped with a pre-configured channel list.

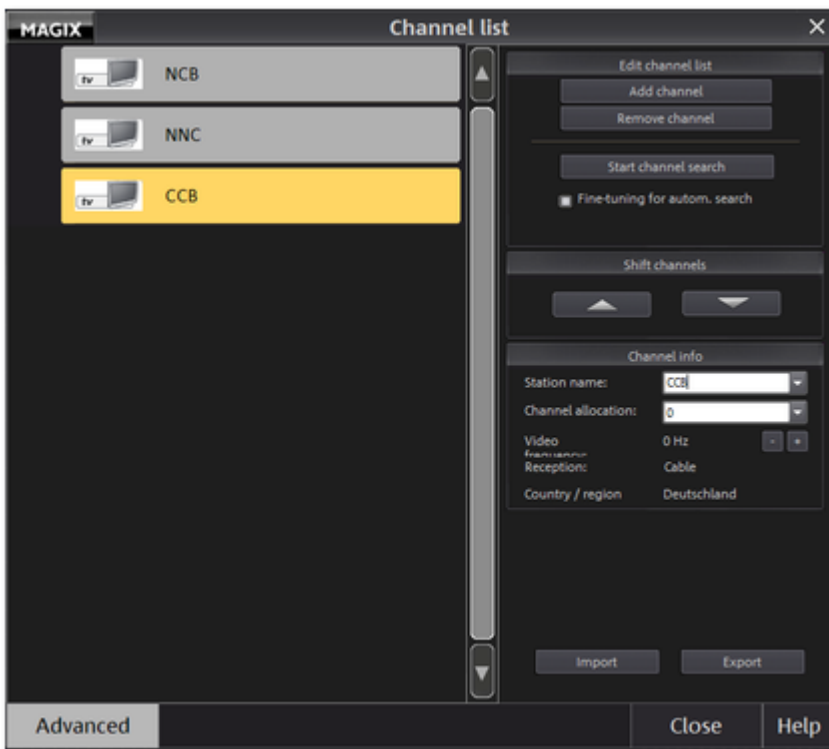
With analog TV reception (antenna or cable), however, you will have to set up the TV channels you can/wish to receive before using the TV or the VCR for the first time. This is done much in a similar way to using a "real" TV by using the in-built channel search function.

- In the start view of the MAGIX Videorecorder click on the "TV" [button](#) switch it on.
- On the transport control below click on the television symbol to open the favorites and the channel list.



- The empty favorites list will now open.
- At the top of the list click on the "Channel list" [button](#). You will now be shown the list of set channels. The favorites list is empty, but that's what is about to change. Click on "Advanced" to access the channel list options.





- In the options [field](#) to the right you can start the channel search function and configure the channel list.

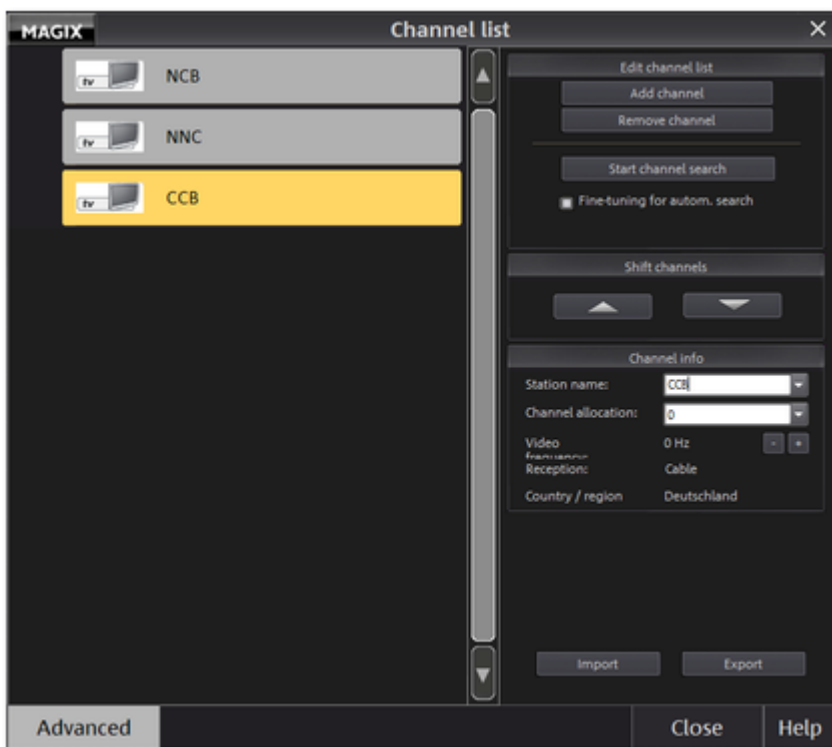
**Tip:**

The option "Switch on fine-tuning during autosearch" increases the likelihood of finding TV channels accurately. Reception will improve, but it will take longer for the channel search function to complete.

# Channel list for analog programs



You can access the channel list by clicking on the corresponding symbol in the transport control and then on the "Channel list" [button](#). Open the "Channel list" [dialog](#) options by clicking on the "Advanced" [button](#)



## Channel list:

The programmed channels are displayed in the channel list to the left.

## Add/Remove channels:

Use these options to add/remove channels from the list.

## Start channel search function:

After opening the dialog for the first time, the first thing you should do is activate the station search function. Here, according to the selected reception option (cable or antenna), the frequency range will be searched for channels that it can receive.

## Switch on fine-tuning during autosearch:

This option increases the likelihood of finding TV channels. Reception will improve, but it will take longer for the channel search function to complete. Found channels will be numbered in the channel list.

## Move channel

: Use the arrows to move the position of a channel up and down in a list.

## Channel name:

The corresponding channel name can be added to each channel entry. This has to be done manually, because channel networks are not numbered uniformly. Select the channel from the list and enter the appropriate name on the right.

## Video frequency: If the [image](#)

of sound reception is poor, the frequency can be fine tuned using the "+" and "-" buttons to improve it.

## Note:

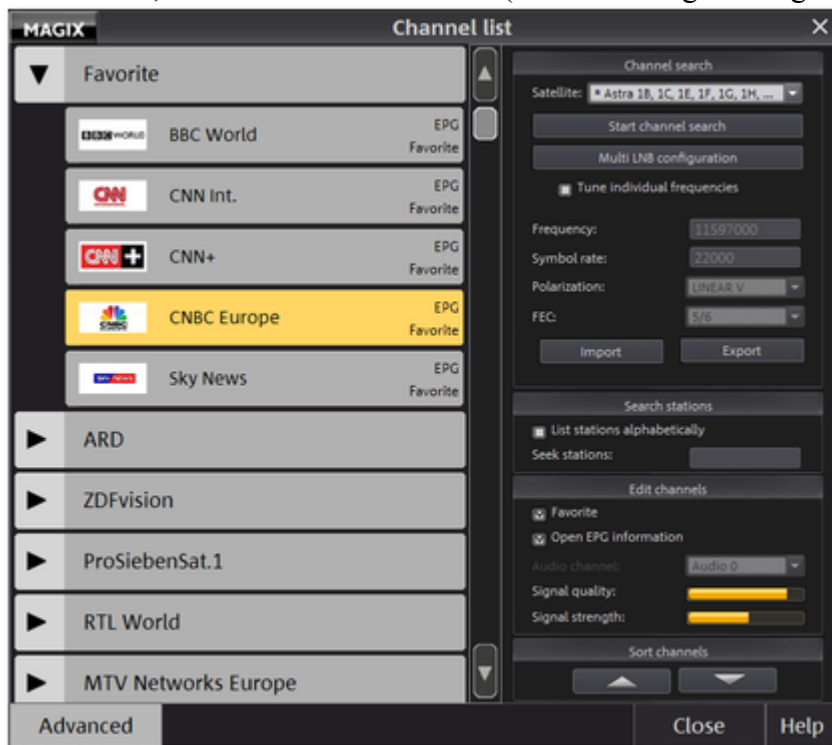
It's important that the channels are given the correct names as the Electronic Program Guide programs the VCR using these names.

## Import/Export:

You can save the current MAGIX channel list using the Export button. Using the Import button, it is possible to import a channel list. This way you can, for example, use the channel list that you have created in an earlier program version or in a different MAGIX program with a TV function.

# Channel list for DVB cards

If you select a DVB card as your TV tuner, a few details are changed in the station configuration. Furthermore, DVB includes its own EPG (Electronic Programming Guide).



Stations are grouped together in so-called "Bouquets". The station list shows only these channel bunches, and individual stations can be displayed with a double click. They don't have to be renamed. At the top of the list is a favorites packet, which allows you to sort your favorite stations with the "Favorites" [button](#).

## Use "Advanced"

to access the settings for the station search function and for the individual channels. With DVB-S the satellite can be selected, and with DVB-T you can select the region. Using frequency lists, you can quickly find stations. With "Individual frequencies", you can make a specific station search through particular frequencies. It will find available channels and sort them into new or available "bunches".

**Multi LNB configuration:** Opens the [hardware](#)

configuration for DVB-S cards. If the VCR opens correctly but you still don't receive a picture, you can make additional settings here. If you have several LNBs connected to your satellite system, you can also configure them here.

**List channels automatically:** All channels are automatically listed alphabetically (irrespective of the bunch they belong to). The channels are automatically marked with icons indicating whether they are normal, encrypted ("crypt") or radio channels ("[audio](#)").

## Search for channels:

Entering the first letter will help you find your channel faster.

## Edit channels:

Here you can sort a channel into the favorites packet and specify whether or not EPG data should be requested or not. Since some stations have multiple sound tracks, you can select them with "audio channel". This concerns especially channels with Dolby® Digital 5.1 Surround Sound.

**Import/Export:** You can save the current MAGIX channel list using the Export [button](#)

. Using the Import button, it is possible to import a channel list. This way you can, for example, use the channel list that you have created in an earlier program version or in a different MAGIX program with a

TV function.

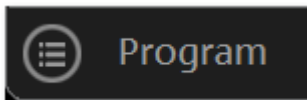
In case you use a DVB-T card, you can visit [http://www.linuxtv.org/vdrwiki/index.php/Main\\_Page](http://www.linuxtv.org/vdrwiki/index.php/Main_Page) for more information.



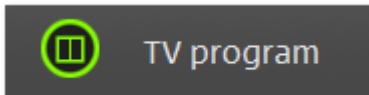
# TV program

The "Program" [button](#)

in TV mode of the MAGIX Videorecorder opens the TV program view.



This provides the option to get informed without any paper about TV programs: The free DVB-TV Guide offers a 14-day overview of the TV schedule. DVB reception via a DVB stick or a DVB card is required for this to work. The program overview can be selected via the "TV program" [button](#)



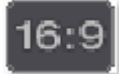
The DVB TV replaces your conventional TV guide and provides more comfort than your standard guide:

- You can search for specific programs, for example, if you can't quite remember which channel shows your favorite program.
- Shows can be programmed directly as recordings without having to tediously program your video recorder, saving you time.
- You can set the order of the channel list yourself, without having to stick to the order of your standard TV guides.

## Additional information about the selected program

The "Additional information" [dialog](#) can be opened by double-clicking on a program. Here you will find detailed information on the selected program. This may also include an age recommendation if provided.

**Recording:** The selected program is added to the timer of the VCR if you click on the "Record" [button](#)



This symbol appears in programs that are broadcast in **16:9** (widescreen) format.

## Capture options

In this [dialog](#)

you can specify actions that should be executed after the last programmed recording: shut down the computer and update the EPG files.

### **Recording time adjustment:**

If the EPG data differs from the actual starting and finishing times of the shows, you can set the buffer times here to start the recording earlier or finish it later.

# Timer programming



The timer programming for time-controlled VCR recordings can be opened via the "Timer" [button](#)

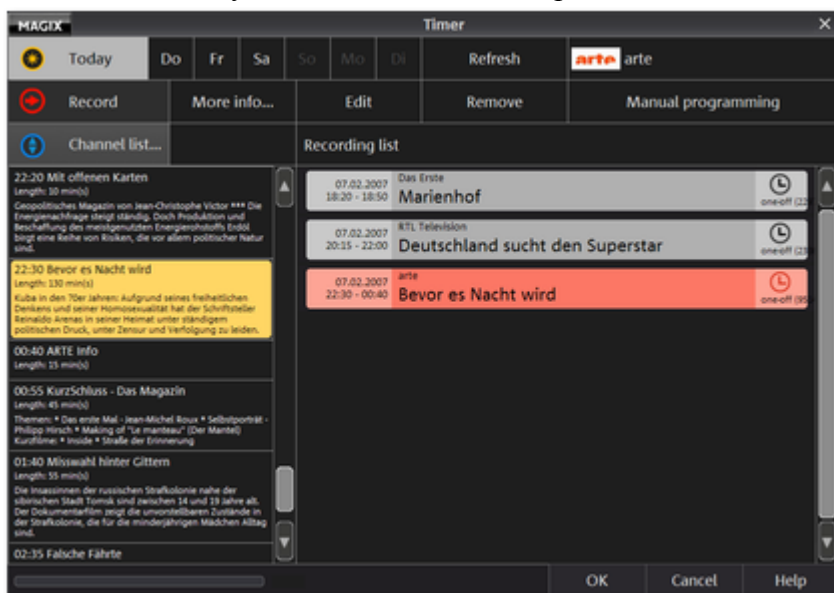
**Note:** If you use one of the two integrated EPGs (the DVB TV Guide or the MAGIX Online TV Guide), the data of the EPG is used to make timer programming easier. If you choose not to use either of the EPGs, you can also choose to execute the timer programming [manually](#)

If recordings have been programmed and you exit MAGIX [Movie](#)

Edit Pro 16, a small tray symbol makes sure that just before the recording starts, MAGIX Movie Edit Pro 16 starts again and the VCR turns on.

**Note!**

The automatic updates from Windows XP (with SP2) & Windows Vista may force the computer to reboot, so that the programmed recording will be interrupted or not started at all. For this reason, it is recommended that you deactivate automatic updates for Windows.



To the left of the [dialog](#), the program of the current show is displayed. On the right-hand side of

the  
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see  
all  
of  
the  
pre  
-pr  
ogr  
am  
me  
d  
rec  
or  
din  
gs.

**Recordings:** First of all, select the program you wish to record from the list on the left. Then click on the "Record" [button](#) to move the show into the recording list on the right.

**More information**

: Here you can check up on additional information relating to a show.

**Edit**

: This button (or by double clicking entries in the recording list) opens the "Program recording" dialog.

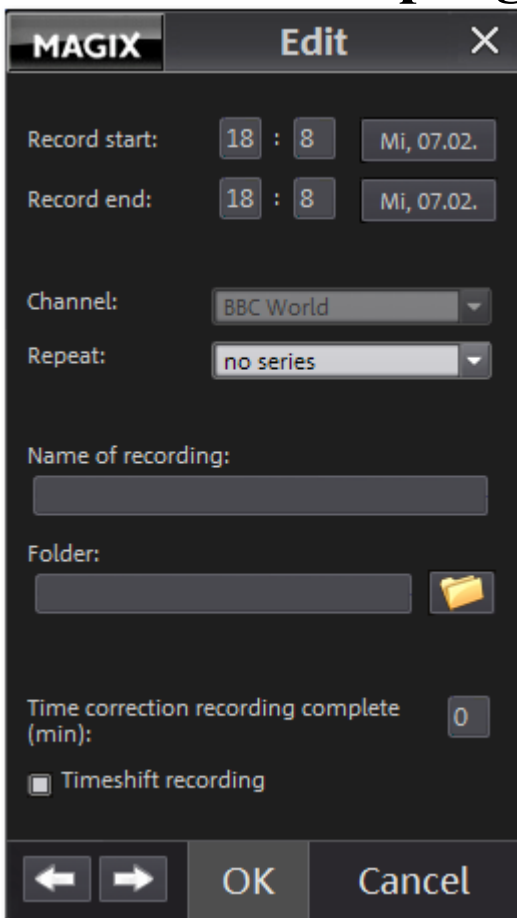
**Remove**

: This button removes the selected shows from the recording list.

**Manual programming**

: You can also insert, edit, or remove recordings manually. This is especially necessary if you use neither the DVB TV Guide nor MAGIX Online TV Guide.

# Manual timer programming



The screenshot shows the 'MAGIX Edit' window with the following fields and controls:

- Record start:** 18 : 8, Mi, 07.02.
- Record end:** 18 : 8, Mi, 07.02.
- Channel:** BBC World (dropdown menu)
- Repeat:** no series (dropdown menu)
- Name of recording:** (text input field)
- Folder:** (text input field with a folder icon)
- Time correction recording complete (min):** 0 (spin box)
- Timeshift recording**
- Navigation buttons: left arrow, right arrow, OK, Cancel.

## Recording start/end:

Here you can specify when the recording should start and end as well as the date. Clicking on the date opens up a calendar.

## Channel:

Here you can specify which channel is to be recorded.

## Repeat:

Here you can define a series of recordings to record daily or weekly shows.

## Recording/Folder name:

You can also give the recording a descriptive title and change the recording folder.

## Correct time at end of recording (min):

If the recording time was programmed via the EPG, you can add additional time to extend the record time.

## Timeshift recording:

Recording starts in Timeshift mode, i.e. you can already watch the program while it is being recorded.

# Timeshift mode



In Timeshift mode for analog TV cards the program can be recorded and played back at the same time. This way, a TV show can be watched with a time delay if so wished.

As soon as you switch to Timeshift mode, the show is "stopped". Of course, it remains running in the background and is still being recorded. A transport console opens. Use this to move back and forth

through the program. This way you can, for example:



Stop the program to take a telephone call. To do so, simply activate Timeshift mode. Once you're finished with your call and you wish to resume viewing, click on the playback [button](#)



Fast forward the ads. Start the video recorder in Timeshift mode when the program starts. Then do something else for roughly the amount of time ads will show throughout the duration of the program. When you decide that you want to watch the program, press the play [button](#)

. If an ad-block comes, simply use the "Jump ahead 30 seconds" button to skip the ads.



Replay: Here you can rewind. Start Timeshift mode and playback at the exact same time. Now move the position [slider](#) to the far right. Playback is now in the "present". If something exciting happens, you can use the "Jump back 30 seconds" button to get an action replay, just like if you are watching a football match.

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# Save recorded programs

Use the video recorder [button](#)

"Open recording folder" to access the folder with the recorded programs.



A standard [dialog](#)

for file selection now opens.

You can sort the programs according to channel, name and record time, delete programs or view advanced EPG information for the program. DVB radio recordings are not played by the video recorder,

but you can press a [button](#)

to listen to the recordings using MAGIX Music Manager.

# Insert object into the project

In this chapter

[Video monitor](#)

[Load files](#)

[Load parts of film files.](#)

[MPEG-4 import](#)

[Automatic scene detection](#)

# Video monitor

All selection processes are conducted on the video monitor. Here you can view and edit material before importing. There is a preview function for all of the files in the Media Pool.

- Use the playback [button](#) to start the preview of video or [image](#) objects in Media Pool. For special objects like titles or fades a preview is given.
- [Audio](#) files and synthesizer objects from the Media Pool can also be listened to using the playback [button](#).

**Tip:** Useful presets for the arranger and video monitor can be found in the tab [Display presets](#) in the program settings.

## Full screen view

The option "full screen" in the [context menu](#)

maximizes the preview monitor. Alternatively, a double click on the monitor or "A+Enter" also maximizes the window. The fullscreen view is especially recommended for working with two screens; one screen for the film preview, and the other for the arranger.

You can also shift the monitor into full screen mode and access it via the context [menu](#) (right mouse [button](#)

). There, you can also hide and display the basic transport controls.

With "Esc" you will go back to the normal view (or click on "smaller" [button](#) to the right in the fullscreen mode).

## Show movie overview

The option "Film overview" in the "Window" [menu](#)

enables an overview of the entire arranger. All objects in the arranger will be displayed in the program monitor. The overview display is especially recommended for work with long movies because the reduced overview in the program monitor and the zoomed detailed view in the arranger present a good combination.

The film overview can be used for moving around in the [movie](#) and for editing certain parts:

- When you click on a certain object in the video monitor, the arranger will zoom on that object.
- Using the mouse, you can draw a [frame](#) in the video monitor and the corresponding range will be zoomed in the arranger.
- When you move the playback marker in the video monitor, the arranger playback marker will also move correspondingly.

**Tip:**

If you use this option very often, you can use the keyboard shortcut (Shift + A).

## Load files

Media files can be loaded into the Arranger from the Media Pool in several different ways:

- **The fastest way:** Drag the desired file with the mouse [button](#) held down from the Media Pool into the desired track. If there are objects at this position, the file is inserted at the desired time position at the next empty track below.
- **Load several files:** If you would like to load several files, hold down the "Ctrl" key while clicking on the entries you would like to use. If you would like to load a sequence of files, hold the "Shift" key and first click on the first entry, then on the last. All entries lying in between are marked. Every file can be moved from the Media Pool to the Arranger using drag & drop.


## DVD files (VOB) with multiple audio tracks

MAGIX [Movie](#) Edit Pro 16 also loads VOB files that contain multiple [audio](#) tracks. After the VOB file loads, simply click the audio object created and select the desired audio track.

**Note:** To view and select [audio](#) objects in the arrangement, Timeline mode must be active.

## Load parts of film files.

For longer videos, it is recommended to define the areas which should be loaded into the [project](#) before import. For this, an in and out point is set, defining the area. This is done in the following way:

- Please select a file from the Media Pool by double clicking on it. Play it back using the play buttons to indicate the section which you want to use in the project.
- Either move the area markers directly with held down mouse [button](#) or set them using the buttons or the shortcut **I** and **O**. The shortcuts are especially useful for exact positioning using the shuttle and the jog wheel. 
- Left-click on the monitor and drag it down with the held-down mouse. An object will appear on the track and in the project folder simultaneously, corresponding to the selected area.

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- **Load several files:** If you would like to load several files, hold down the "Ctrl" key while clicking on the entries you would like to use. If you would like to load a sequence of files, hold the "Shift" key and first click on the first entry, then on the last. All entries lying in between are marked. Every file can be moved from the Media Pool to the Arranger using drag & drop.


## DVD files (VOB) with multiple audio tracks

MAGIX [Movie](#) Edit Pro 16 also loads VOB files that contain multiple [audio](#) tracks. After the VOB file loads, simply click the audio object created and select the desired audio track.

**Note:** To view and select [audio](#) objects in the arrangement, Timeline mode must be active.

## Load parts of film files.

For longer videos, it is recommended to define the areas which should be loaded into the [project](#) before import. For this, an in and out point is set, defining the area. This is done in the following way:

- Please select a file from the Media Pool by double clicking on it. Play it back using the play buttons to indicate the section which you want to use in the project.
- Either move the area markers directly with held down mouse [button](#) or set them using the buttons or  the shortcut **I** and **O**. The shortcuts are especially useful for exact positioning using the shuttle and the jog wheel.
- Left-click on the monitor and drag it down with the held-down mouse. An object will appear on the track and in the project folder simultaneously, corresponding to the selected area.



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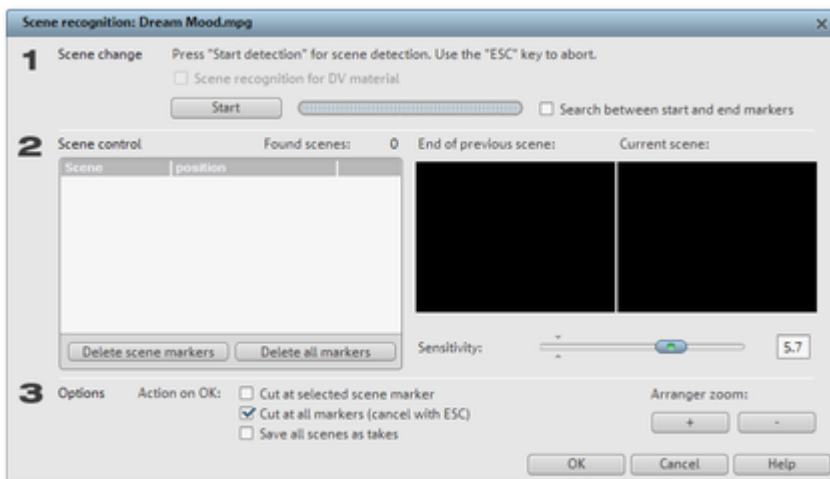
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- Left-click on the monitor and drag it down with the held-down mouse. An object will appear on the track and in the project folder simultaneously, corresponding to the selected area.

# MPEG-4 import

[MPEG](#) -4 files can be loaded from the Media Pool just like other files using drag & drop. Videos that have a higher horizontal resolution than 768 pixels can only be imported by MAGIX [Movie](#) Edit Pro 16 Plus.

**Note:** To import and export AVC and [MPEG](#)-4 files, the MPEG-4 codec must first be [activated](#). A [dialog](#) will open if the codec is required. Files with a horizontal resolution of more than 768 pixels can only be loaded in MAGIX [Movie](#) Edit Pro 16 Plus.

# Automatic scene detection



Automatic [scene](#) recognition can be opened via the "Effects" [menu](#)

. The scene recognition function analyzes the film for scene transitions and scans for drastic changes in the brightness and color distribution within the picture.

Automatically created timestamps from digital video devices (the points in time at which the device was turned on and off) are also marked as scenes.

1. First, select "Start" from the "Search scene change" box. The search for possible scene transitions will begin. If you have a large amount of material, then this may take a while, but the [image](#) analysis has to be done just once for each recording. The results are saved together with the video file.
1. If the scene recognition is performed again with the same source material, then the scene transitions found are immediately displayed. If you are still not happy with the resulting scene partitioning simply repeat and correct where necessary.
2. All found scene transitions in the list can be checked in the [dialog](#). Every scene marker can be selected or deleted. Select a scene transition from the list of found scene transitions and use the preview images to check whether the found transition is really a scene change or not.

## Tip:

This option is helpful, for example, if a camera flash was captured in the source footage. The flash from the camera would cause a sudden brightness modification even though there was no actual scene change.

The preview always displays the end of the previous scene and the beginning of the new scene. If the images do not differ except for the brightness, then the scene may have been falsely recognized. In this case select "**Delete scene marker**"

Via the zoom +/- buttons you can enlarge the part of the arranger where the selected scene begins or previous scene ended.

You can use the "**Sensitivity**"

controller to change the sensitivity of the scene recognition to detect different scene changes, depending on the settings.

"**Action on OK**" lets you specify whether the [movie](#) should be cut at the selected scene transition or at all [scene](#) transitions and whether the found scenes should be saved as takes.

# Working with objects

In this chapter

[Select objects](#)

[Moving objects](#)

[Splitting objects](#)

[Edit menu](#)

[Duplicate objects](#)

[Object handles](#)

[Shrink or interlace videos](#)

[Extract sound from videos](#)

[Save objects separately](#)

[Video mix](#)

[Magnetic objects](#)

[Transitions \(fades\)](#)

[Overview mode](#)

[Grid and snap](#)

[Searching for and removing ads \(Plus version\)](#)

# Select objects

To edit or delete objects using the menus, you must first select them. To do so, simply click on the object you wish to select. Objects will change color to show that they have been selected.

When the "Shift" key is pressed, multiple objects are selected. You can open up a rectangle positioning the mouse over the object, then holding down the mouse [button](#)

and marking all objects within the rectangle ("elastic band selection") by left clicking and dragging.

Any object can be combined with others to make up a group to avoid objects being unintentionally moved out of relation to each other. Once they are combined, clicking on one object of a group will select the entire group. To group or ungroup objects, use the buttons in the tool bar or the corresponding commands in the "Edit" [menu](#)

# Moving objects

Any object selection can be moved (dragged) along the horizontal timeline or vertically into different tracks by clicking and holding the left mouse [button](#) on the selected objects. After releasing the mouse [button](#)

the objects appear at the new location.

If the "Shift" key is pressed while moving the object selection, then the object's horizontal time position will be maintained. The object selection can only be moved vertically (up and down to different tracks).

# Splitting objects

All objects can be split. Each object section then becomes is then split into individual objects.



- First of all, select the object to be split.
- Position the playback marker at the position where the [movie](#) is to be cut.
- Click on the "Cut" [button](#) or select the "Cut" option in the "Edit" [menu](#).

In order to rejoin these split objects at a later stage, simply highlight the individual parts and select the command "Create group" to group the selected objects together.

# Edit menu



With a click on the small arrow beside the cut [button](#), you can access the cut [menu](#)

. There you will find further relevant commands.

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## Split

This command cuts a [scene](#) at the point where the playback marker is positioned. This way, two free-standing objects are created.  
Keyboard shortcut: T

## Remove start

This command cuts a [scene](#) at the point where the playback marker is positioned and removes the material before the playback marker.  
Keyboard shortcut: K

## Remove object end

This command cuts a [scene](#) at the point where the playback marker is positioned and removes the material behind the back marker.  
Keyboard shortcut: U

## Remove scene

If you want to cut a [scene](#) out of a [movie](#) retroactively, this option automatically moves all objects, titles, and transitions on all tracks forwards so that no gaps result.  
Objects on other tracks which [project](#) into the area of the selected scene will not be moved automatically; they will remain at the current position.  
Keyboard shortcut: Ctrl + Del

## Split movie

This command splits a [movie](#) at the point where the playback marker is positioned, making two separate movies. The part before the playback marker will remain in the arranger. The remaining part will be erased from the current arranger and turned into a new movie, which can be found in the "Window" [menu](#).  
Keyboard shortcut: Alt + T

## Duplicate objects

It is easy to copy objects to create larger arrangements from small [audio](#) or video loops quickly. Speed up this process by clicking on the object to be copied with the mouse while holding down the "Ctrl" key. This generates a copy which you can immediately drag to the desired position.

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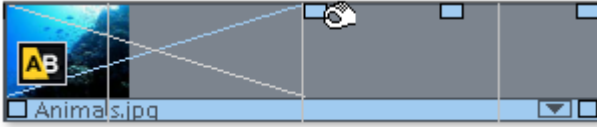
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# Object handles

All objects can be re-sized with the "object [handles](#)

" on the lower edge. Move the mouse over one of the lower corners of the object until the mouse pointer becomes a double arrow. You can now stretch the object as much as you like.



5 "handles": Length, fade, brightness (volume)

An object can be faded in or out using the handles to the left and right upper corners of the object.

Crossfades between different objects can be created by overlapped positioning of objects that are fading in and out. The length of the [crossfade](#) can be adjusted with the handles.

Using the brightness/volume handle located centrally at the top of the object, adjusts the volume of [audio](#) or [MIDI](#) objects, or the brightness of video and [image](#)

objects. Even if several objects are playing simultaneously, the volume or brightness of individual objects can still be altered.

# Shrink or interlace videos

Videos can be made smaller, e.g. to show a foreground video in a cut-out of a background video. To do this, both videos have to be placed above each other in the arranger.

- Place one video above the other in the tracks.
- Position the foreground video on the track beneath the background video.

## Note

: Make sure that the mixing effect "Stamp" is active under "Video effects -> Chroma key".

- Select the foreground video, and in the Media pool under "Effects -> Movement effects", select the entry "Position/Size" or "Crop/Zoom".
- You can change the [image](#) area/size by holding down the mouse [button](#) and dragging the edges of the video in the program monitor. This is also useful for placing the selected video at the desired position in the program monitor.

For more detailed information, see the section entitled "Movement effects in Media Pool" in the chapter "[Effects and titles](#)". Nearly all preset effects may be automated or animated. To animate effects or produce movements, please read the "[Animating objects](#)" chapter.



# Extract sound from videos

Video with sound material appears in the arranger on two tracks as two objects (an [audio](#) object and a video object). The two objects automatically form a group.

To edit the video and audio material separately from one another, the objects can be separated with the [Ungroup](#) function in the "Edit" [menu](#) or [button](#) in the arranger. Now you can replace the [audio](#) or the video track, or process each file separately. Rejoin/regroup the tracks with the "Export arrangement" function.

# Save objects separately

You can easily save the object from the Arranger as separate files. Objects contain a reference to any multimedia file or a special objects (video, sound, visual, etc.) with all additional properties that an object can have like in and out point, fade and effects including effect curves that can be used in MAGIX [Movie Edit Pro 16](#).

In MAGIX Movie Edit Pro 16 you can use Takes for various applications.

- You can divide your videos into takes while loading into the Arranger. To do this, first press the "Media/Film" [button](#). The transport functions of the transport control no longer apply to the objects in the Arranger but rather to the video file selected in the Media Pool.
- The Extras [button](#) lets you set in and out points for scenes. The selected [scene](#) can subsequently be saved to the Takes directory.
- All scenes found by the automatic scene recognition function can be stored in the Takes directory. This creates the basis for a quick assembly of found scenes.
- This takes directory may be used in both direction: either as a source of takes to be dragged into the Arranger or a destination directory for new scenes. Use the Takes directory to build complex storyboards: The individual scenes that make up the video are cut first, before being arranged on the tracks.
- Since Takes also contain corresponding effects, one can store different variations of the same movie with different effects (for example, video cleaning) in the Takes directory. The Takes directory uses very little memory in contrast to rendering out the actual video files!

## Video mix

This term refers to mixing various videos while simultaneously playing them. The video objects to be mixed must be placed one below the other in the arranger so they overlap in time. Add a special video mix effect to the lower video, which determines the parts that will be transparent for the upper video. This way, you look from the bottom to the top through the arranger.

To make a dancer dance in front of a landscape using the "blue box" effect, the landscape must be placed on, for example, track 1 and the dancer on track 2 and the "blue box" effect be activated for the dancer.

**Tip:** For further details on video effects and adjustments, see the chapter "[Video effects](#)".

## Magnetic objects

You can attach a video, picture, or text object to moving picture content of another video. The "[Image object](#)" automatically completes the movement of a picture element from the film. For example, you could use this method to insert a hat that stays on someone's head throughout, even if the person hops through the picture. Let's roll:

- Place an image object (e.g. a photo of a hat) on a track below a video with a corresponding image element (e.g. a walking person). The picture element should have enough contrast in it (bright-dark difference) and should have a consistent size.
- In the Media Pool under "Effects -> Movement effects -> Position/Position", you can match the zoom of the image object to the video and then position it precisely (i.e. add the hat to the person).
- Right click on the image object and select the "Attach to image position in the video".
- In the "Attach to image position in the video" [dialog](#), click on "Change size and position".
- Select an image section in the preview monitor using the mouse which you would like the image object to follow. This section should have as high a level of contrast as possible.
- Calculation of the object movement starts automatically.

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# Transitions (fades)

When importing video files into the arranger, individual objects usually follow directly after one another. This is called a "hard cut". However, you can make scenes blend or "transition" into each other. This means that for the duration of a transition, two objects are shown at once and can be mixed "faded" together in different ways. You will find numerous blends in the Media Pool's transition directory.

In this chapter

[Simple crossfade](#)

[Fades from the Media Pool](#)

[Custom fades via alpha keying \(Plus version\)](#)

[3D transitions](#)

[3D series](#)

## Simple crossfade



A simple transition can be created in the arranger by dragging one object over another. A [crossfade](#) will be automatically created. During this standard transition, the brightness of both objects is increased, i.e. the first clip fades out while the second clip fades in. The duration of the crossfade is displayed in the arranger by white crossing lines. You can adjust the length of the crossfade by dragging the upper [handle](#) of the second object to the left or to the right.



To select a different fade click on the transition symbol displayed when an object is selected.

The fade [menu](#)

opens. The transition icon will change, depending on your selection.

## Fades from the Media Pool

To open the fade directory, click the "Fade" [button](#); double clicking enables a preview of the fade in the preview monitor.

Simply drag the desired fade preset onto the border between the two objects. Only when the mouse pointer with the transition preset is placed over a [scene](#)

change will it turn into an object symbol. The object at the back will be shifted to the front to accommodate the transition.

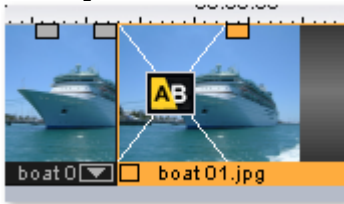
The length of a transition is decided by you, so if a transition is shortened, it means that the resulting effect is speeded up.

Some transitions can be adjusted even more exactly. To do so, click the corresponding fade symbol in the timeline or in the storyboard and select "Settings". An object's fade symbol in the Media Pool can represent an entire group of different effects.


The alpha fades (in the directory: iris, objects, random, etc.) are actually pre-produced black and white videos combined with the alpha keying effect.

**Note:** Use transitions economically! Most professional movies or TV shows use hard cuts as the rule and transitions less frequently. Videos appear unprofessional and too ornate if fade effects are added to every change of [scene](#)

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## Custom fades via alpha keying (Plus version)

Alpha keying extends the range of transition effects used in MAGIX [Movie](#)

Edit Pro 16 to produce black & white movie transitions or selected color fade-ins and fade-outs. You can create such a video from any video material (also color) by exporting it as a transition (File -> Export movie -> Export as transition).

The loaded movie is then exported as a black and white video in [mxy](#) format and stored in the fade directory. Afterwards, it will be available on the Media Pool and in the fade [menu](#)

## 3D transitions

### General options

3D power effects offer exciting and varied opportunities for creating transitions between two videos. You will find the 3D effects in the Media Pool's transitions directory.

To display the 3D fades as smoothly as possible, the program uses the accelerator features of your graphics adaptor. 3D functions can be used with both [software](#)

standards: Direct3D and OpenGL. These standards are variably supported by the respective graphics card drivers. For this reason, you can switch between different fade settings for each standard.

### Settings

In the transition settings you can adjust the look and reaction of the 3D transitions. To do so, click the corresponding fade symbol in the timeline or in the storyboard and select "Settings".

The following options are then available to you:

#### **Anti-aliasing**

: An undesirable step effect is usually created at the borders of 3D objects. Anti-aliasing reduces this effect, but also requires more computer power. This setting applies globally for all 3D fades. Switching anti-aliasing for a 3D transitions therefore ensures that this setting is applied to all other 3D transitions

**Mirror X/Y:** This option lets you influence the movement curve of the 3D objects within the transitions. The "X axis mirror" option mirrors the movement of the object *horizontally*. The option "Y axis mirror" mirrors the movement of the object *vertically* (along the Y axis).

**Rendering:** Determine which software standard (see above) you would like to use to render the 3D objects, i.e. OpenGL or Direct3D. Both modes use the [hardware](#) functions of the graphics card to render the 3D transition. Nevertheless, they can produce different results, both in performance as well as in the final look of the transitions.

To use Direct3D, you have to have DirectX9.0a installed. OpenGL requires an OpenGL1.1 driver. This setting applies globally to all 3D transitions. Switching between the render modes of a 3D transition therefore ensures that all other 3D transitions also use this setting.

#### **Hardware acceleration deactivation**

: Hardware-accelerated rendering on the graphics card increases the performance multiple times over; however, it may lead to problems on some systems. If errors should occur in connection with the 3D transitions, you can deactivate hardware acceleration for calculating 3D transitions.

To do this, select the "Program settings" item from the file [menu](#) and deactivate the options "Hardware acceleration for 3D effects". To apply these changes, you will need to restart the program.

## Troubleshooting



**Problem**

: The 3D transition display in the video monitor is sluggish and jittery.

**Solution:** The performance of the 3D power effects is dependent on your graphics adapter's [CPU](#) power. To achieve a smoother display you can deactivate anti-aliasing in the 3D transitions settings [dialog](#), or you can choose a lower resolution for your screen. Furthermore, you should ensure that you have the latest driver for your graphics card installed. During export or burning to disc, transitions will be displayed fluidly in any case.

**Problem**

: The screen remains black or displays errors during 3D transitions.

**Solution:** The 3D transitions use hardware-accelerated rendering on your graphics card to calculate the [image](#)

. This can lead to compatibility problems on certain systems. Please ensure that you have the latest driver for your graphics card installed. In certain circumstances, this may also fix the switchover between the render modes (in the settings dialog of the transitions) or solve the problem by deactivating anti-aliasing. If there are still problems, however, you can deactivate hardware acceleration completely. Refer to "Deactivating hardware acceleration" for more info.

**Problem**

: A warning that there is insufficient graphics card memory for rendering the transition is displayed when exporting or burning a slideshow containing 3D transitions.

**Solution**

: The video memory on your graphics card is insufficient to render the 3D effect at the desired resolution. Select a lower resolution (e.g. 720 x 576) in the export dialog. If the problem persists, deactivate the hardware acceleration as described in the section "Deactivating hardware acceleration".

**Problem:** Only a [crossfade](#)

is displayed when previewing a 3D transition. A warning is displayed that insufficient graphics card memory is available

**Solution**

: The video memory of your graphics card is insufficient to render the 3D effect at the desired resolution. Right click the video monitor and then select a lower resolution in "Resolution presets". If the problem persists, try deactivating hardware acceleration as described above.


**Problem**

: Only a crossfade is displayed when previewing a 3D transition. A warning is displayed that the 3D transition may not be displayed correctly.

**Solution:** Deactivate [hardware](#) acceleration; see "Deactivating [hardware](#) acceleration".

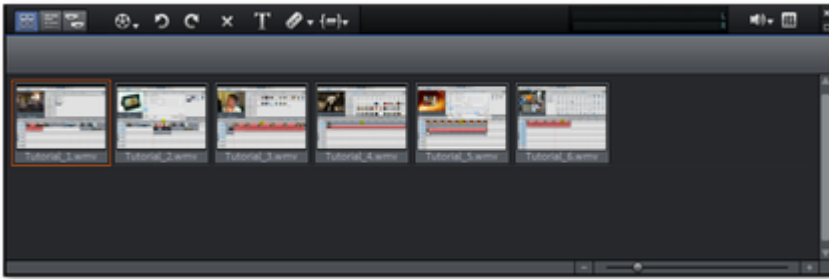
## 3D series

The 3D series are a further development of [3D transitions](#), whereby the transitions are thematically sorted. For instance, you can make photos pop up and disappear on a notice board or make it look as if the photos were hanging on the walls of a gallery. There are several options to load 3D series for photos or [scene](#) transitions:

- Click the "Fades -> 3D -> 3D series" [button](#) in the Media Pool. Select the desired 3D series and drag it onto the first scene or [image](#) transition where the 3D transition should start.
- In the transitions [menu](#) between two scenes choose the  option "3D series". Click on the desired 3D series to select it.

You can select how many of the subsequent fades should be replaced by the 3D series in the [dialog](#).

# Overview mode



The "[Scene overview](#)" mode is a special view that improves manageability and categorization of scenes. All scenes are listed one after the other (in multiple lines, like in a text program) and can be copied, cut, moved, deleted and inserted.

In the "Overview" mode, there are no start, play, or end markers. The scene being played back has a [frame](#) around it.



This [slider](#) specifies how large the photos will appear in the storyboard. The smaller the scenes, the more of them you'll be able to fit on screen.



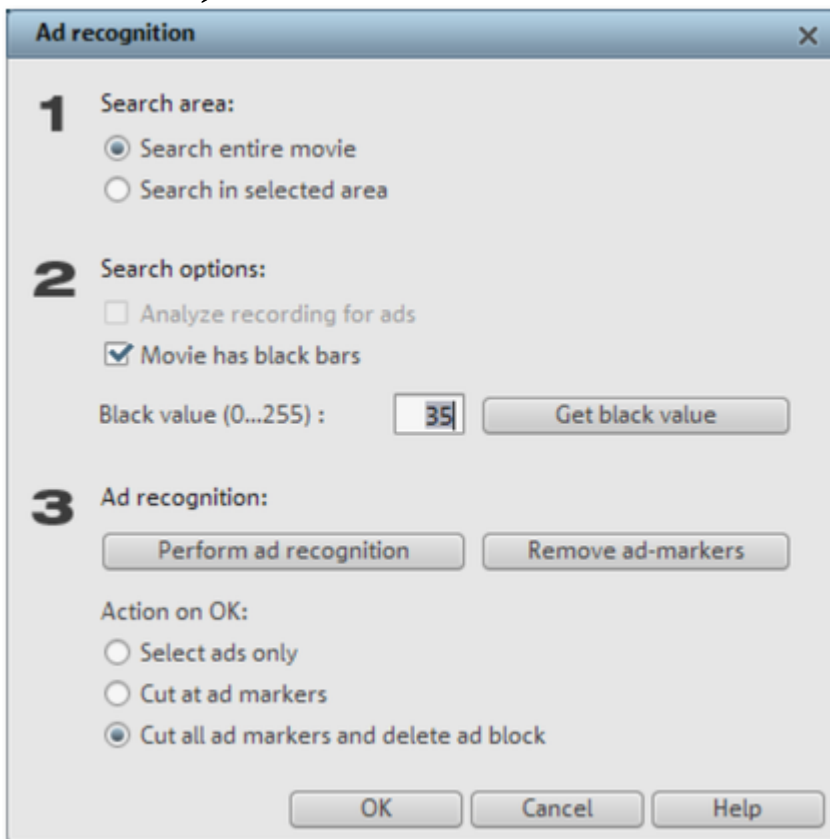
**Maximize:** Use this [button](#) to maximize the scene overview to fullscreen.

## Grid and snap

The time of the arrangement is displayed by the horizontal course of the tracks. To structure this course, a timeline with a grid has been positioned at the top above the first track.

A grid is also displayed in the arranger area. The raster ensures that the objects always "snap" to certain points so that they can be positioned precisely according to the beat. Two consecutive objects will seamlessly snap together even if they are on different tracks. This avoids undesired gaps or overlaps.

# Searching for and removing ads (Plus version)



The "Ad killer" feature can be used to automatically locate and remove commercials in recorded TV programs.

**How it works:** First, characteristics typical of commercials are located, and then the entire section including the ads is edited and removed. This is particularly effective in movies broadcast in 16:9 widescreen format since there are two visible black borders at the top and bottom. The borders disappear when ads are shown, so the ad killer detects this when they disappear and edits the [movie](#) at these positions. Using the [button](#)

"Get black value" you can click on the black bars in the monitor and thus set the color shade in order to improve detection. A further characteristic typical for commercials is raising (maximizing) the volume. Specify in this [dialog](#)

whether you want to cut the ad block immediately or highlight it first. You also have various search and display options.

Keyboard shortcut: Shift + C

# Markers

MAGIX [Movie](#) Edit Pro 16 also allows you to set various types of markers within your [project](#)



The **Lock** [button](#) lets you lock all markers (jump markers, chapter markers) against accidental moving or deleting.

In this chapter

[Playback marker](#)

[Set project marker](#)

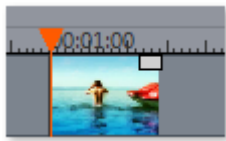
[Area marker \(in and out points\)](#)

[Chapter markers](#)

[Scene markers](#)

[Ad markers](#)

# Playback marker



The playback marker indicates the point from which the material ? either the arrangement or a selected file from the Media Pool ? will be played back. There is a playback marker below each preview monitor and an additional one above the timeline in the arranger.

The playback marker is displayed as a red triangle below the monitors. In the arranger it is displayed as a red triangle.

In order to move the playback marker, simply double click on the desired area below the monitor.

Alternatively, you can click on the playback marker and move it by dragging it with the mouse. While being moved, the current [image](#)

will appear on the monitor, letting you see exactly where in the material you are located.

The playback marker in the video monitor can also be moved by clicking on the lower section of the time scale in the arranger. The playback marker will also be moved on the program monitor, as both markers are coupled to each other.

The exact position of the playback marker can be seen in the time display at the top left, below the corresponding monitor. There, you can change the displayed values (Hour:Minute:Second:[Frame](#)) per mouse click to reach a certain point in time. Simply enter the desired value and the playback marker will jump to the corresponding position.

## Tip

: In the "Playback" tab under "File -> Settings -> Program", you can set whether repeatedly pressing the space bar resets the playback marker to the current position or moves it to the original position.

# Set project marker

The [menu](#) provides the option of placing a [project marker](#) at the current playback location. These provide a way to mark certain segments or events of interest in the [project](#), etc.

After selecting the menu, a [dialog](#)

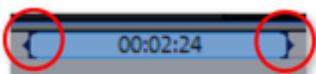
for entering the name of the marker to be created will open. The first 10 project markers may be selected using the number keys 1-0 (0 accesses the 10th marker). This allows you to jump to a particular position of a longer video immediately, without scrolling and searching.

Project markers can be deleted or renamed at any time via the [context menu](#)

. They do not have any direct effect on the results of your work, but they can be very helpful.

# Area marker (in and out points)

Area markers are the start markers (in-points) and end markers (out-points). They serve to mark a certain area, which will be played back by pressing the "area playback" [button](#) at the bottom of the corresponding monitor.



To the left, you see a start marker, and to the right, an end marker.

The area markers in the arrangement serve to indicate the paste position of new video or sound material.

## Hint:

The value between both markers shows the length of the selected area following the pattern of Hours:Minutes:Seconds:Frames.

## Ranges in the video monitor

There are various options for changing the playback area and the in/out points.

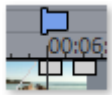
- Set the playback marker at the desired position and press "Set range start" or "Set range end" underneath the monitor to set the in and out points.
- Click on one of the markers below the monitor and move it to the desired position by dragging it.
- Click one of the markers in the upper-most bar in the arranger and drag it.
- Right clicking on the bar moves the out point to the position of the mouse cursor. The area grows or shrinks in size correspondingly. Left clicking moves the in point, whereby the area size stays constant (out point is moved as well).
- You can adjust the position of the entire range by clicking the blue bar between the markers and moving it by dragging while holding down "Ctrl".

Keyboard shortcut:

Set the start of the range (in point) at the position of the playback marker: "I"

Set the end of the range (out point) at the position of the playback marker: "O"

## Chapter markers



The chapter marker defines the start of the new chapter. Chapters improve navigation when burning your [project](#) to [CD or DVD](#).

The following options can be accessed via the "Edit" [menu](#) or by right clicking on a playback marker.

### Marker > Set chapter marker



Sets a chapter marker at the position of the playback marker. This creates a chapter entry in the disc [menu](#), in case you are planning to burn the [movie](#) to CD/DVD.

You can rename your chapter markers by right clicking and selecting "Rename". The name then appears in the [chapter menu](#).

Shortcut: Shift + Enter

### Marker > Automatic chapter markers

Automatically sets chapter markers in the arrangement based on certain rules. These chapter markers determine the chapters in your DVD [menu](#).

This function is useful if you want to burn your recording onto disc right away.

There are a few options for automatic chapter generation:

**At the beginning of the [movie](#):**

The movie contains only one chapter

**At the object starts in a track...:**

Every object in a track creates a chapter. Track 1 is preset.

**At the position of existing title objects:**

Subtitles, for instance as faded-in subheadings, give the position of the chapter markers.

**Provide interval (in minutes)/provide quantity:**

If the chapters are separated without any particular method and are just needed for quicker navigation, you can also insert chapter markers in pre-defined intervals or as a pre-defined number of chapter markers.



### Titling the chapter markers:

To title the chapter markers, you can use a user-defined name with consecutive numbers or the object name or text from the text objects.

Optionally, you can delete existing chapter markers and confine the automatic chapter marker function to the area between the start and end markers.

Keyboard shortcut: Alt + Shift + Enter

## Marker > Delete (all) chapter markers

Deletes one or all chapter markers. This removes chapter entries from the disc [menu](#)

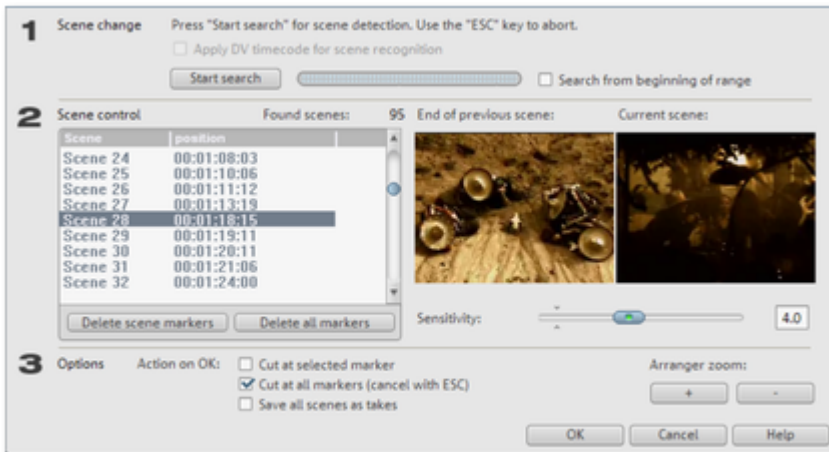
. Read more in "Burn screen".

Keyboard shortcut: Ctrl + Enter / Alt + Ctrl + Enter

## Scene markers

[Scene](#) markers separate a complete video into scenes. You can load any video into MAGIX [Movie](#) Edit Pro 16 and have it divided into scenes.

Simply drag the desired video into the arranger. Then, right click on the video and select "Scene recognition". The following [dialog](#) appears:



After clicking "Start search", an overview of the detected scenes will be displayed underneath the scene control.

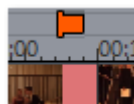
### Delete scene markers

: Here you can delete individual markers by selecting them from a list.

**Delete all markers:** Deletes all [project](#) markers.

**Action on OK:** You have three possibilities: Either MAGIX Movie Edit Pro 16 splits your video into individual scenes ("Cut at all markers"), you select a scene and cut only at this position ("Cut at selected marker") or you can save the scenes as "[Takes](#)".

After deciding in favor of one of these options, red scene markers will appear on the timeline in the arranger. The scenes can then be split according to the selected option and edited.



### Note

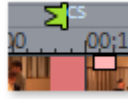
: An important difference between a scene and a chapter marker is that a scene marker can be set only within a continuous video, while a chapter marker can include several consecutive videos.

Additional information about scene recognition is provided in chapter "[Insert objects into the project](#)".

Shortcut for [scene](#)  
recognition: Shift + Z

## Ad markers

Ad markers indicate detected ad pauses. For more on this, please read the ["Search for and remove ads" chapter](#)



## Set project marker

The [menu](#) provides the option of placing a [project marker](#) at the current playback location. These provide a way to mark certain segments or events of interest in the [project](#), etc.

After selecting the menu, a [dialog](#)

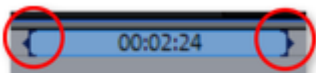
for entering the name of the marker to be created will open. The first 10 project markers may be selected using the number keys 1-0 (0 accesses the 10th marker). This allows you to jump to a particular position of a longer video immediately, without scrolling and searching.

Project markers can be deleted or renamed at any time via the [context menu](#)

. They do not have any direct effect on the results of your work, but they can be very helpful.

## Area marker (in and out points)

Area markers are the start markers (in-points) and end markers (out-points). They serve to mark a certain area, which will be played back by pressing the "area playback" [button](#) at the bottom of the corresponding monitor.



To the left, you see a start marker, and to the right, an end marker.

The area markers in the arrangement serve to indicate the paste position of new video or sound material.

### Hint:

The value between both markers shows the length of the selected area following the pattern of Hours:Minutes:Seconds:Frames.

## Ranges in the video monitor

There are various options for changing the playback area and the in/out points.

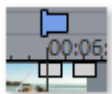
- Set the playback marker at the desired position and press "Set range start" or "Set range end" underneath the monitor to set the in and out points.
- Click on one of the markers below the monitor and move it to the desired position by dragging it.
- Click one of the markers in the upper-most bar in the arranger and drag it.
- Right clicking on the bar moves the out point to the position of the mouse cursor. The area grows or shrinks in size correspondingly. Left clicking moves the in point, whereby the area size stays constant (out point is moved as well).
- You can adjust the position of the entire range by clicking the blue bar between the markers and moving it by dragging while holding down "Ctrl".

Keyboard shortcut:

Set the start of the range (in point) at the position of the playback marker: "I"

Set the end of the range (out point) at the position of the playback marker: "O"

## Chapter markers



The chapter marker defines the start of the new chapter.

Chapters improve navigation when burning your [project](#) to [CD or DVD](#)

The following options can be accessed via the "Edit" [menu](#) or by right clicking on a playback marker.

## Marker > Set chapter marker



Sets a chapter marker at the position of the playback marker. This creates a chapter entry in the disc [menu](#), in case you are planning to burn the [movie](#) to CD/DVD.

You can rename your chapter markers by right clicking and selecting "Rename". The name then appears in the [chapter menu](#).

Shortcut: Shift + Enter

## Marker > Automatic chapter markers

Automatically sets chapter markers in the arrangement based on certain rules. These chapter markers determine the chapters in your DVD [menu](#).

. This function is useful if you want to burn your recording onto disc right away.

There are a few options for automatic chapter generation:

**At the beginning of the [movie](#):**

The movie contains only one chapter

**At the object starts in a track...:**

Every object in a track creates a chapter. Track 1 is preset.

**At the position of existing title objects:**

Subtitles, for instance as faded-in subheadings, give the position of the chapter markers.

**Provide interval (in minutes)/provide quantity:**

If the chapters are separated without any particular method and are just needed for quicker navigation, you can also insert chapter markers in pre-defined intervals or as a pre-defined number of chapter markers.

**Titling the chapter markers:**

To title the chapter markers, you can use a user-defined name with consecutive numbers or the object name or text from the text objects.

Optionally, you can delete existing chapter markers and confine the automatic chapter marker function to the area between the start and end markers.

Keyboard shortcut: Alt + Shift + Enter

## Marker > Delete (all) chapter markers

Deletes one or all chapter markers. This removes chapter entries from the disc [menu](#).

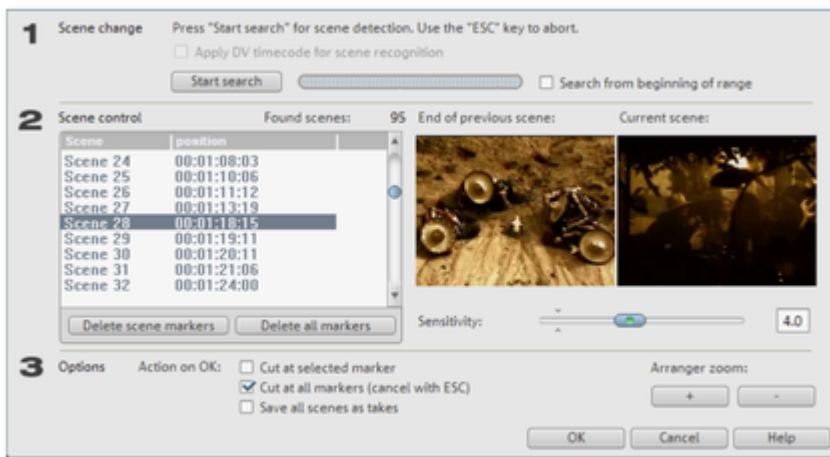
. Read more in "Burn screen".

Keyboard shortcut: Ctrl + Enter / Alt + Ctrl + Enter

## Scene markers

[Scene](#) markers separate a complete video into scenes. You can load any video into MAGIX [Movie](#) Edit Pro 16 and have it divided into scenes.

Simply drag the desired video into the arranger. Then, right click on the video and select "Scene recognition". The following [dialog](#) appears:



After clicking "Start search", an overview of the detected scenes will be displayed underneath the scene control.

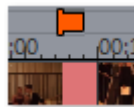
### Delete scene markers

: Here you can delete individual markers by selecting them from a list.

**Delete all markers:** Deletes all [project](#) markers.

**Action on OK:** You have three possibilities: Either MAGIX Movie Edit Pro 16 splits your video into individual scenes ("Cut at all markers"), you select a scene and cut only at this position ("Cut at selected marker") or you can save the scenes as "[Takes](#)".

After deciding in favor of one of these options, red scene markers will appear on the timeline in the arranger. The scenes can then be split according to the selected option and edited.



### Note

: An important difference between a scene and a chapter marker is that a scene marker can be set only within a continuous video, while a chapter marker can include several videos consecutive videos.

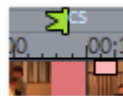
Additional information about scene recognition is provided in chapter "[Insert objects into the project](#)".

Shortcut for [scene](#)

recognition: Shift + Z

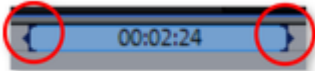
## Ad markers

Ad markers indicate detected ad pauses. For more on this, please read the "[Search for and remove ads](#)" chapter



## Area marker (in and out points)

Area markers are the start markers (in-points) and end markers (out-points). They serve to mark a certain area, which will be played back by pressing the "area playback" [button](#) at the bottom of the corresponding monitor.



To the left, you see a start marker, and to the right, an end marker.

The area markers in the arrangement serve to indicate the paste position of new video or sound material.

### Hint:

The value between both markers shows the length of the selected area following the pattern of Hours:Minutes:Seconds:Frames.

## Ranges in the video monitor

There are various options for changing the playback area and the in/out points.

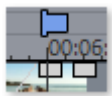
- Set the playback marker at the desired position and press "Set range start" or "Set range end" underneath the monitor to set the in and out points.
- Click on one of the markers below the monitor and move it to the desired position by dragging it.
- Click one of the markers in the upper-most bar in the arranger and drag it.
- Right clicking on the bar moves the out point to the position of the mouse cursor. The area grows or shrinks in size correspondingly. Left clicking moves the in point, whereby the area size stays constant (out point is moved as well).
- You can adjust the position of the entire range by clicking the blue bar between the markers and moving it by dragging while holding down "Ctrl".

Keyboard shortcut:

Set the start of the range (in point) at the position of the playback marker: "I"

Set the end of the range (out point) at the position of the playback marker: "O"

## Chapter markers



The chapter marker defines the start of the new chapter. Chapters improve navigation when burning your [project](#) to [CD or DVD](#).

The following options can be accessed via the "Edit" [menu](#) or by right clicking on a playback marker.

### Marker > Set chapter marker



Sets a chapter marker at the position of the playback marker. This creates a chapter entry in the disc [menu](#), in case you are planning to burn the [movie](#) to CD/DVD.

You can rename your chapter markers by right clicking and selecting "Rename". The name then appears in the [chapter menu](#).

Shortcut: Shift + Enter

### Marker > Automatic chapter markers

Automatically sets chapter markers in the arrangement based on certain rules. These chapter markers determine the chapters in your DVD [menu](#)

. This function is useful if you want to burn your recording onto disc right away.

There are a few options for automatic chapter generation:

**At the beginning of the [movie](#):**

The movie contains only one chapter

**At the object starts in a track...:**

Every object in a track creates a chapter. Track 1 is preset.

**At the position of existing title objects:**

Subtitles, for instance as faded-in subheadings, give the position of the chapter markers.

**Provide interval (in minutes)/provide quantity:**

If the chapters are separated without any particular method and are just needed for quicker navigation, you can also insert chapter markers in pre-defined intervals or as a pre-defined number of chapter markers.

**Titling the chapter markers:**

To title the chapter markers, you can use a user-defined name with consecutive numbers or the object name or text from the text objects.

Optionally, you can delete existing chapter markers and confine the automatic chapter marker function to the area between the start and end markers.

Keyboard shortcut: Alt + Shift + Enter

## Marker > Delete (all) chapter markers

Deletes one or all chapter markers. This removes chapter entries from the disc [menu](#)

. Read more in "Burn screen".

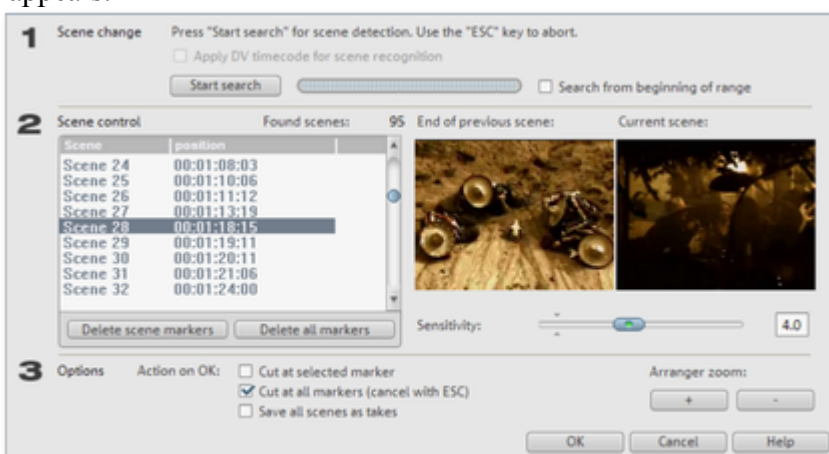
Keyboard shortcut: Ctrl + Enter / Alt + Ctrl + Enter

## Scene markers

[Scene](#) markers separate a complete video into scenes. You can load any video into MAGIX [Movie](#) Edit Pro 16 and have it divided into scenes.

Simply drag the desired video into the arranger. Then, right click on the video and select "Scene recognition". The following [dialog](#)

appears:



After clicking "Start search", an overview of the detected scenes will be displayed underneath the scene control.

**Delete scene markers**

: Here you can delete individual markers by selecting them from a list.

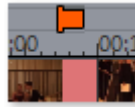
**Delete all markers:** Deletes all [project](#)

markers.

**Action on OK:** You have three possibilities: Either MAGIX Movie Edit Pro 16 splits your video into individual scenes ("Cut at all markers"), you select a scene and cut only at this position ("Cut at selected marker") or you can save the scenes as "[Takes](#)"

"

After deciding in favor of one of these options, red scene markers will appear on the timeline in the arranger. The scenes can then be split according to the selected option and edited.



### Note

: An important difference between a scene and a chapter marker is that a scene marker can be set only within a continuous video, while a chapter marker can include several videos consecutive videos.

Additional information about scene recognition is provided in chapter "[Insert objects into the project](#)"

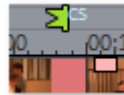
"

Shortcut for [scene](#)

recognition: Shift + Z

## Ad markers

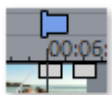
Ad markers indicate detected ad pauses. For more on this, please read the "[Search for and remove ads](#)" chapter



.



# Chapter markers



The chapter marker defines the start of the new chapter. Chapters improve navigation when burning your [project](#) to [CD or DVD](#)

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You can rename your chapter markers by right clicking and selecting "Rename". The name then appears in the [chapter menu](#)

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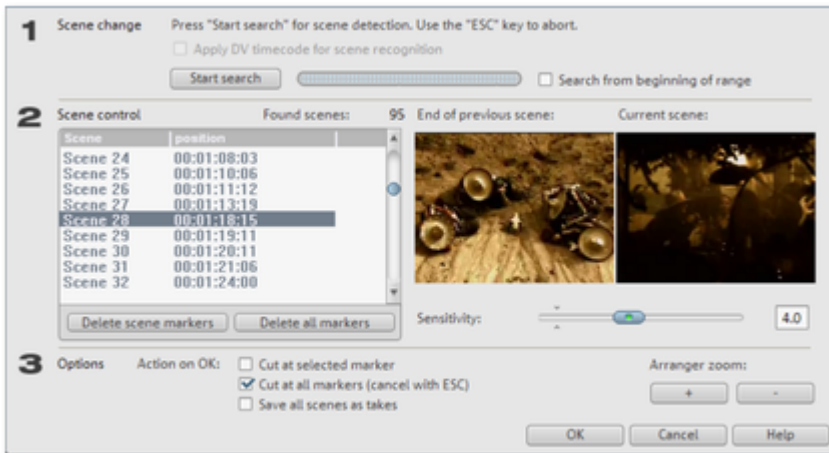
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Keyboard shortcut: Ctrl + Enter / Alt + Ctrl + Enter

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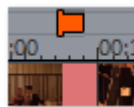
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**Action on OK:** You have three possibilities: Either MAGIX Movie Edit Pro 16 splits your video into individual scenes ("Cut at all markers"), you select a scene and cut only at this position ("Cut at selected marker") or you can save the scenes as "[Takes](#)".

After deciding in favor of one of these options, red scene markers will appear on the timeline in the arranger. The scenes can then be split according to the selected option and edited.



### Note

: An important difference between a scene and a chapter marker is that a scene marker can be set only within a continuous video, while a chapter marker can include several videos consecutive videos.

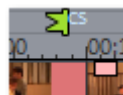
Additional information about scene recognition is provided in chapter "[Insert objects into the project](#)".

Shortcut for [scene](#)

recognition: Shift + Z

## Ad markers

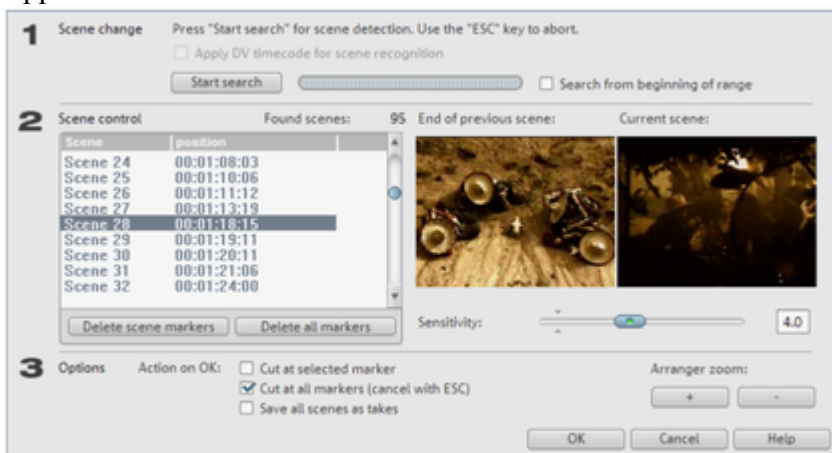
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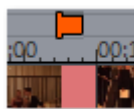
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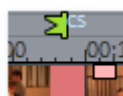
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Shortcut for [scene](#)

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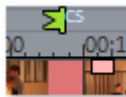
# Ad markers

Ad markers indicate detected ad pauses. For more on this, please read the "[Search for and remove ads](#)" chapter



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# Trim Objects

Trimming provides exact placement of object borders or transitions. MAGIX [Movie](#) Edit Pro 16 has two different trimmers, and these can be opened using the [context menu](#) for a video or [image](#) object.

In this chapter

[General advice for operating both trim editors](#)

[Trimmer for individual objects](#)

[Cut trimmer](#)

# General advice for operating both trim editors

## Play functions

: The trim window contains its own play functions that allow the object to be played individually or in relation to the arrangement.

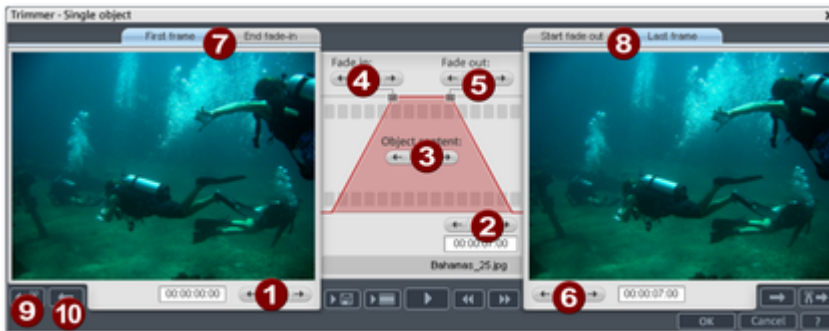
- The right play [button](#) plays the arrangement normally. Note: Replays can sometimes appear shaky because the processor may be overworked, and some frames may be left out.
- The middle play [button](#) plays the arrangement "[frame](#)-by-frame", which means no frames are left out, but that the replay may be slower.
- The left play button renders material before playing. This method ensures a smoother playback.

The start marker in the timeline is reset when the rewind and fast-forward functions are activated, allowing for complete control of transitions between two videos.

**Increments:** A click on the +/- buttons in both trim editors places the handle or the material within an object exactly into a frame. With the "Ctrl" key you can increase the [frame](#) rate (5 frames/sec per mouse click).

# Trimmer for individual objects

A schematic display of the selected object and its [handles](#) can be found in the center of the trimming window.



## Fade in/out (4, 5):

These buttons adjust the upper fade handles of an object.

## Object content (3):

Here you can move the video material to be played without changing the object length.

## Position (2):

Moves the object on the track.

## First [frame](#)/End fade-in (7):

Toggles the left monitor between the first frame of the object and the end of the transition.

## Start fade-out/Last Frame (8):

Toggles the right monitor between the start of the transition and the last frame of the object.

## Left/right arrow buttons (1, 6):

Here you can adjust the lower object handles.

## Next object/cut (9, 10):

The buttons below and to the right skip to the next/previous object and/or cut in the arranger. These buttons make it easy to move and trim objects in the arrangement without having to leave the trimmer.

Keyboard shortcut: Q

# Cut trimmer



A schematic display of the selected transition and its [handles](#) can be found at the center of the trimming window.

**Left arrow buttons (1):** These buttons move the last [frame](#) of the first object while adjusting the second. The length of the transition remains. The display indicates the relative change in comparison with the starting situation when the trimmer was opened.

**Position (2):**

Moves the second object. The length of the transition is changed. This corresponds with shifting an object in the arranger.

**Object content (3):** Moves the [movie](#)

under the second object. The length of the object and the object itself are not changed.

**Crossfade (4):**

Changes the transition's length between both objects. The objects remain of equal length. The length can be numerically entered.

**Middle arrow buttons (5):**

Shifts the existing transition. Both objects remain in their positions, but the transition's center point moves.

**Transition (6):**

Displays the type of transition. A mouse click opens a popup window from which you can select a transition.

**Right arrow buttons (7):**

Move the first frame of the second object. The first object and the transition remains. Only the length of the second object changes.

**Start fade-out/Last frame (8):**

Switches the left monitor between the start of the transition and the last frame of the object.

**First frame/End fade-in (9):**

Switches the right monitor between the first frame of the following object and the end of the transition.

**Next cut (10)/Next object (11):**

The buttons below and to the right skip to the next/previous object and/or cut in the arranger. These buttons make it easy to move and trim cuts in the arrangement without having to leave the trimmer.

Keyboard shortcut: N



# Multi-cam editing (Plus version)

Multi-cam editing enables easy cutting of various recordings of the same [scene](#) from different camera perspectives. The preview monitor shows the [image](#) material from two sources next to each other, from which the "program" can be cut in real time using your mouse ? just like in a real studio.

In this chapter

[Preparation](#)

[Source tracks and preview images](#)

[Multicam edit functions](#)

# Preparation

Multicam editing is a special arranger mode. The top two tracks serve as target tracks for copying sound and video from two different source tracks. The two top tracks must be empty when switching into the multicam mode, otherwise existing objects will be moved to a different track.

Next, load various video recordings of the same [scene](#) one under the other starting on track 3 in the arranger.

It is important that the individual sources are synchronized to each other exactly. It is best to find a noticeable movement, or an "o" sound, if [audio](#) was recorded.

To localize the sound in the audio track exactly, you may have to create a [wave](#) display of the track. Right click on the sound track and choose "Create wave form display".

You can use a clapperboard during filming, since this offers both sound and motion; an actor's clapping in front of running camera before the start of the scene is also helpful. Set a grid point at this position in the object ("Alt + Shift + P"). You can now move the source objects over each other, so that the grid points are aligned.

It is also important that you make all effect settings for the output material (e.g. video or audio cleaning)

**before** the multicam edit on the objects on the source track and on the [master audio track](#)

. These effects will be transferred to the objects in the target track with the edit. Otherwise, you will have to apply the effects from every single object to the target track.



You can activate "Multicam" mode with this [button](#) or with the "Multicam" command in the "Edit" [menu](#)

# Source tracks and preview images

The assignment of tracks as source tracks for the multicam cut takes place automatically. When the multicam mode is activated, the source tracks will be assigned to all tracks containing video objects starting from track 3.

You can also conduct or change the assignment manually. To do so, right click on the trackbox of the corresponding track to active or deactivate a track as a source track. In this way, you can use more than two tracks for multicam editing, but no more than two simultaneously. The source tracks are marked using color.



A preview appears in the program monitor for every assigned track, and the source track's color corresponds to the preview images so that you can quickly assign each preview [image](#)

If the objects created using multicam cut are located on the target track, a preview image of the corresponding source track highlighted with a yellow [frame](#) will be shown for length of playback.

# Multicam edit functions

You can edit various sources in the the target track during playback in real time or during stopped playback.

## Real-time multicam editing

You can edit various sources together during playback in real time.

1. Start playback.
2. Click on the desired source in the preview monitor.
3. The corresponding video added into the target track starting from this time point.
4. To switch the source, click on another source, and a new object from another source will be created from this point. You can repeat this process as often as you like.

For precise editing in the target track, use the usual edit functions or the Trimmer. Keep in mind that as long as you are in multicam mode, only the object borders are moved, and not the objects themselves.

Otherwise, gaps or [image](#)

jumps could result while you use the multicam edit function again later.

## Replacing an object's source

Replacing an object's video material in the target track with another source:

1. Select the object for which the source is to be replaced in the target track.
2. Click the source you want to replace the video material in the source monitor object.
3. The video material will be replaced by the material selected in the new source. The [project](#) length is not changed.

## Insert cut

Insert material from one of the sources between any position on the target track and the next object.

1. Place the playback marker on the desired position.
2. Click on the desired source in the preview monitor.
3. The material from this source will be added to the target track, the new object will end at the next object, and the section lying below an existing object will be overwritten.

## Overwrite range

You can overwrite a selected area of the target track with one of the source videos.

1. At the upper edge of the arranger, select an area to edit by determining the in point by clicking and the out point by right clicking. Or use the corresponding buttons in the transport control.
2. Click the desired source in the program monitor.
3. The target track will be overwritten with the video material from the selected source in the selected area.

## Master audio track

Normally, videos in the source track are edited together with their [audio](#) tracks. Since the original sound can differentiate from camera to camera due to different camera positions, you will probably prefer using either the soundtrack from only one camera for all settings, or to replace the soundtrack completely (for music videos, for example, you will use the studio version of the original track).

Right click on the track box of one of the source audio tracks or a different audio track and select "Multicam: Master audio track" from the [context menu](#)

to assign a master audio track for multicam editing. The master audio track will be appear in a dark

color.

Now, during every multicam cut, material from the master [audio](#) track will be inserted on track 2, independent of the source track used.

## Master audio track

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Now, during every multicam cut, material from the master [audio](#) track will be inserted on track 2, independent of the source track used.

# Titles and effects

MAGIX [Movie](#) Edit Pro 16 offers a large palette of video effects. The video effects that are used the most can be found directly in the Media Pool, while others can be found in the object [context menu](#) or in the "Effects" [menu](#)

In this chapter

[3D text](#)

[Apply fades](#)

[Apply effects to objects](#)

[Video effects in the Media Pool](#)

[Movement effects in the Media Pool](#)

[Video effect plug-ins](#)

[Image stabilization](#)

[Create panorama pictures](#)

[Borders](#)

[Title Editor](#)

[Slideshow Maker](#)

[Master effects](#)

[TV picture](#)

[Audio Effects](#)

## 3D text

3D text can be created directly from the Title Editor. Click the Title Editor and then press the "X3D title" [button](#)

. The title object will now be turned into a MAGIX 3D object. If you have also installed MAGIX 3D Maker, the program will open for you to work on the text.

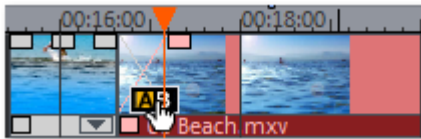
Presets are also located in the Media Pool under "Titles -> 3D". You can enter or process text here.

For more information about MAGIX 3D Maker, try the help file. You can open it by pressing "F1" from within the program.



# Apply fades

Fades can be selected in the Media Pool under "fades" and moved into the space between two objects using drag & drop. In addition, they are available directly in the fades [menu](#) between two objects (see figure).



Find out more on this topic under ["Transitions"](#)

# Apply effects to objects

All title and effects for objects are accessible via the Media Pool. There are various methods for applying effects:

- Titles, static effects and [audio](#) effect presets are loaded into the corresponding object using drag & drop.
- Effects that can be animated (in Media Pool under "Effects -> Video effects/movement effects") will be applied directly to the objects selected earlier as soon as changes are made in the Media Pool.

# Video effects in the Media Pool

Video effects in the Media Pool can always be opened independently from the selection of an object. The program monitor displays the starting [image](#) of the video. The playback marker enables you to jump to a specific position in the video in order to check the results of the effects by starting and stopping playback.

# Brightness & Contrast

## Brightness/Contrast

: Use the sliders to increase or reduce the brightness and the contrast of the picture.

## Selective brightness (gamma)

: "Gamma" determines the mean grayscale that can be calculated from the various color ranges. "Selective brightness" is the most important function for enhancing images. In the preset list select various adjustment curves and edit the dark, middle, or brightest points in the picture.

Using the [fader](#)

you can also set the power of the brightness/darkness adjustments.

**Auto exposure:** With this [button](#)

you can automatically optimize the exposure and contrast with a click.

# Color

## White balance

All light is not the same. Depending on whether it is sunlight or artificial light, this will have an effect on color variation. The human brain is able to compensate for this variation: A white sheet of paper will still look white under candlelight, although it is in fact much more yellow than by daylight.

In order to imitate this filtering done by the brain, a camera must also analyze and correct the light. White balance does the same thing to a picture that the brain does by setting the camera to the so-called "color temperature" of the surroundings.

If you do not possess a camera which performs this function automatically, you can apply the white balance function in MAGIX [Movie](#)

Edit Pro 16.

An incorrect white balance can lead to an unnatural blue or red hue.

**Directions:** To use the white balance, click on the [button](#) to the right of the label "White balance" and then select a point which represents white or a neutral gray to the "outside world". The color temperature is then corrected automatically.

### Tip

: Cool color effects can be achieved by setting a different color as the white benchmark. There is definitely room for experimentation!

## Red-eye-removal

This photo function removes unnatural redevye that the results from using a flash. Click on the eye symbol and then select the red pupils in the preview monitor using the mouse.

### Hint:

For photo optimization, we recommend you use MAGIX Photo Manager. The program is installed automatically and can be used for quick previewing and easy management of pictures from your database. It has a tool for correcting redevye and setting auto color and white balance to control discoloration in pictures.

## Saturation

You can increase or reduce the color portions of images with the "saturation" [fader](#). A newly developed algorithm is applied which makes color changes related to other parameters (for example contrast settings) in order to achieve the most natural coloration possible. With just a little bit of experimentation, you can achieve astounding results ? anything from turning summer snapshots into autumnal scenes to funky pop art!

## Hue

Select a color for coloring the [image](#) from the color chart.

## Red/Green/Blue

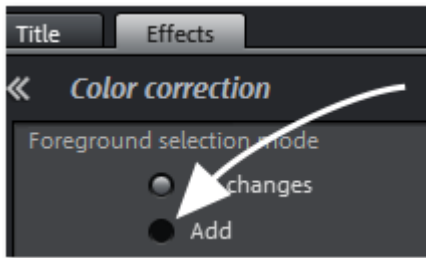
Using the "Red/Green/Blue" [slider](#), you can change the color portion mix for each color.

## Edit color ranges individually

Secondary color correction allows individual colors in video and [image](#) objects to be adjusted. This includes essentially two layers, the fore and background. The master layer may also be used to influence the overall image.

The foreground layer corresponds with the mask created, and editing in the background changes all of the areas outside of this mask. The mask may be assigned to a certain color or to multiple colors simultaneously.

To open color correction, click the video or [image](#) object and open the entry "Color correction" via "Video effects" in the Media Pool.



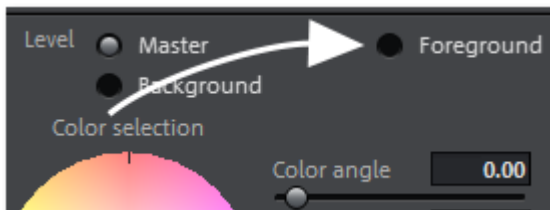
"Add" allows a color to be selected with the pipette tool to create a mask. [MAGIX Movie](#)

Edit Pro 16 displays the mask in black and white stripes to highlight the current selection.

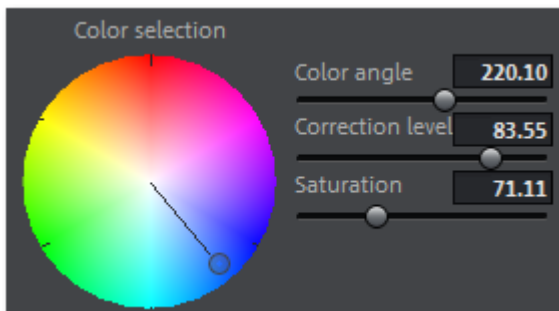


Click with the pipette tool on the color in the program monitor that you would like to add to the current layer until your selection is complete.

Unwanted colors can be removed from the selection again by selecting "Remove" and clicking the corresponding color.



Select the layers (fore and background) to edit.



Now edit the selection as usual.



A classic example: Saturation of all brightness areas on the background layer is reduced, and colors in the foreground are adjusted as desired.

## Chroma key

This section contains the mixing effects for chroma keying used to mix together a foreground and background video to create an overlay effect.

**Note:** The background video must be present in the track above the object for the foreground!

For example, track 1: background, track 2: foreground

**Stamp:** The currently selected object is "stamped" onto the video on the track above the object. This is only possible if the bottom video takes up only a part of the [image](#), as otherwise only the bottom (currently selected) video would be visible. The object should be reduced or moved first. This can be achieved using the edit functions (see above) or the "Selection" sub-[menu](#) in the "Effect" menu. To find out more, read "[Shrink or interlace videos](#)"

"

### Color

: Select the range with the color that should be transparent in the video monitor. The video is made transparent in the areas featuring this color, and the video on the top track can be seen "through" these areas.

**Mix:** This [button](#) mixes the two videos together. With the aid of the fade [handles](#), very soft cross-fades can be achieved between the partially overlapping videos.

### Black/blue/white/green screen

: The selected video covers up the video on the top track and all black/blue/white/green areas appear transparent. This makes it possible to "place" a person who has been recorded in front of a blue (or green, white or black) background into any type of landscape or background.

**Alpha:** This video effect uses the brightness of a video to control a cross-fading effect between two other videos on neighboring tracks. The additional videos should be situated directly above and below the alpha-keying object.

In all black parts of the alpha-keying object, the top video is faded in, while in all white passages the bottom video is shown. Grey passages are permeable for both videos and create a mixture of the two. In the case of colored passages, the brightness of the color is used for control purposes.

**Video level:** The video level essentially changes the brightness of the video before other video effects are applied. This can have significant influence on the effects, especially in case of chroma keying. The effect can be automated; read about this in the chapter "[Animating objects](#)"

"

## Artistic filter

**Erosion:** The [image](#)

is broken up by means of small rectangles and resembles a "patchwork".

### **Dilate**

: The image is broken down into cell-like elements.

### **Emboss**

: The edges are strongly highlighted.

### **Substitution**

: Using the rainbow scale red, green, and blue parts are exchanged. Quickly create surreal landscapes and green faces.

### **Shift**

: The color values are increasingly inverted. Blue colors turn red; green ones appear purple.

### **Quantize**

: Depending on the setting, colors are either rounded up or down so that the overall number of colors is reduced. This creates impressive grids and patterns.

**Color fill:** Using this [slider](#)

, you can color in your video using red, green and blue colors (the basic TV colors).

**Contour:** The [image](#)

is reduced to its contours in two sizes (3 x 3 or 5 x 5); vertical or horizontal contours may be selected.



## **Distortion**

**Motion:** Moving parts of the [image](#) are enhanced and warped.

### **Echo**

: The moving images create an optical "echo"; previous images stand still and gradually turn paler until they completely disappear.

### **Whirlpool**

: The image is twisted into an "S" shape.

### **Fisheye**

: The perspective is distorted as if the image were viewed through a fisheye lens.

### **Mosaic**

: The video is depicted as a mosaic.

### **Lens**

: The image is dynamically distorted at the edges.

### **Sand**

: The image is depicted in a granulated manner.

### **Kaleidoscope**

: The left upper corner is mirrored horizontally and vertically.

### **Horizontal/Vertical mirror**

: The object is reflected vertically or horizontally ? it appears on its side or upside down.

## Sharpness

The [fader](#) allows you to regulate the level of [image](#) sharpness or apply a soft filter.

"Fine adjustment" allows you to set how sharp surfaces or edges should appear. This enables you to effectively reduce [image](#) distortions (noise).

## Speed

The playing speed can be adjusted with the [slider](#) control. The range between 0 and 1 plays the video slowly; values above 1 accelerate playback. If the playing speed is increased, the object length in the arranger is automatically shortened.

**Reverse:** This [button](#) reverses the playback direction (with the same tempo).

**Note:** Since the soundtrack of a [movie](#) cannot be played backwards, you have to first separate the [movie object from its soundtrack](#)

. The speed effects cannot be animated!

## **Animation**

Nearly all preset effects may be automated or animated. To animate effects or produce movements, please read the "[Animating objects](#)" chapter.

# Movement effects in the Media Pool

## Size & Position



### Values in:

Set whether the values are applied in percent or pixels.

### Position

**Left:** Enter the start position from the left [image](#) border.

### Top:

Enter the start position from the top image border.

### Center:

Based on the current image size, the image starting points (left and top) will be positioned so that they are centered.

**Note:** Negative values can, of course, also be entered. The [image](#) borders will then be outside of the visible area.

### Size

**Width:** Enter the width of the [image](#)

### Height:

Enter the height of the image.

**Note:** The size and the position of the image can be roughly entered in the program monitor by simply moving the image into it and dragging on the [handles](#)

**Maximize:** The image will be maximized according to the [movie](#)'s resolution.

### Set original size:

The image will be scaled to its original size.

### Retain proportions:

This option makes sure that the image will not be stretched or distorted. The proportions of width to

height will remain the same.

**Edit:** In the "Edit" mode you can change the position and size of the [image](#) using [handles](#) that can be displayed or hidden.

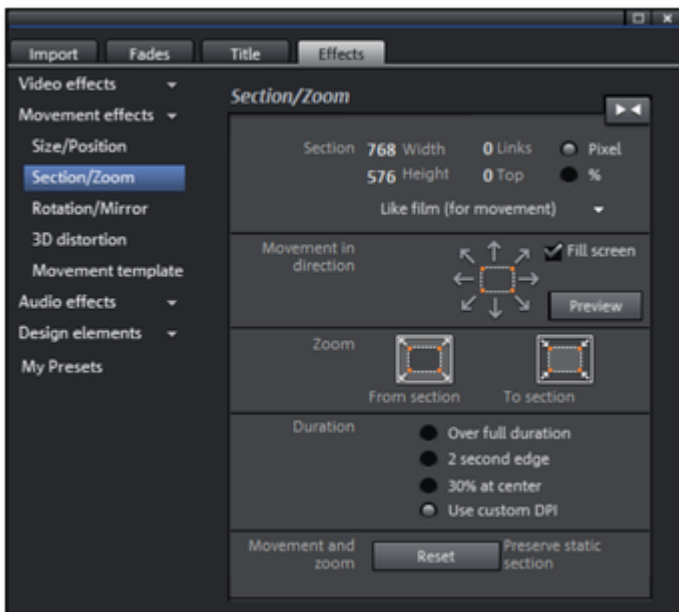
The [frame](#)

of the video monitor can be moved with the keyboard.

Nudge the screen 1 pixel:                      Arrow keys

Nudge the screen 5 percent:                Shift + arrow keys

## Camera movement



## Cutaway

Cropped cutaways can be used to:

- display just one section of the photo.
- to move the clip through the picture with the help of a movement effect ? the result is a type of camera movement. Please read more on this in the next chapter, "Movement".

In the program monitor, you can set a picture section to serve as the basis for the movement effect. Press the left mouse [button](#) and drag out the section you want to use.

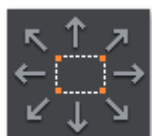


Alternatively, both buttons can be used to specify the section.

**Keep proportions:** In this [menu](#)

, you can select the format for the section. The format of the original picture is used as the default.

## Movement in direction



Determine the direction in which the selected section or [image](#)

will move during the time indicated under "duration". In addition to horizontal and vertical movements, diagonal movements are also possible.

## Fullscreen

: If this check box is active, the opened section will zoom to fullscreen. If this option is switched off, it won't be possible to add movement to the section.

## Preview

: Displays a preview of the section at the playback marker location.

## Direction and time



### Zoom in

: The entire picture is displayed and then zoomed to show only a smaller picture section according to the time set in "Length of movement". If no portion is previously set, a central portion of 50% of the picture is set.



### Zoom out

: The selected picture section is displayed and is then zoomed out to display the entire picture according to the time set in "Time period". If no portion is previously set, a central portion of 50% of the picture is set.

## Direction and time

The value specified here determines the position at which the keyframes for the corresponding movement effect are set as standard. They determine the positions at which the pan start and stops.

**Note:** Automatically placed keyframes can be edited retroactively, and the option will then be set to "User defined". Read the section "[Changing an effect's keyframes](#)" in the chapter "[Animating objects](#)".

## Movement & zoom



### Reset:

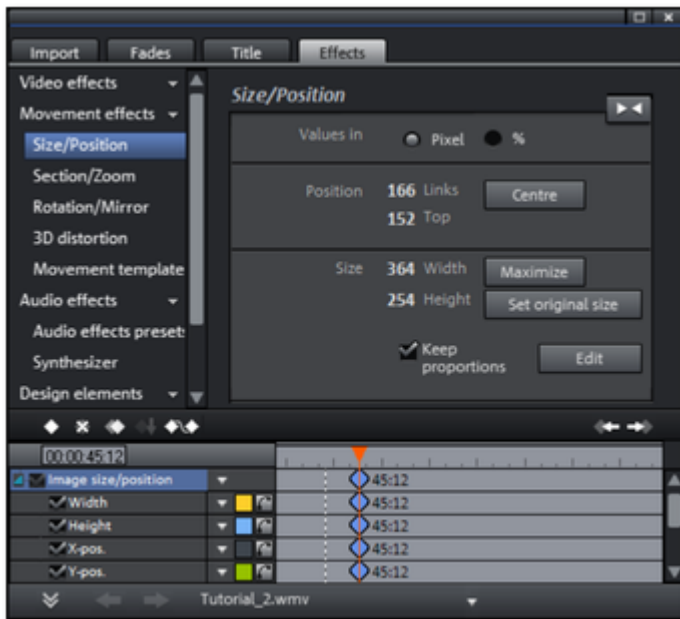
This option applies a static zoom to show the selected section of the picture only.

The [frame](#) of the video monitor can be moved with the keyboard.

Nudge the screen 1 pixel:                      Arrow keys

Nudge the screen 5 percent:                Shift + arrow keys

## Size & Position



### Values in:

Set whether the values are applied in percent or pixels.

### Position

**Left:** Enter the start position from the left [image](#) border.

### Top:

Enter the start position from the top image border.

### Center:

Based on the current image size, the image starting points (left and top) will be positioned so that they are centered.

**Note:** Negative values can, of course, also be entered. The [image](#) borders will then be outside of the visible area.

### Size

**Width:** Enter the width of the [image](#)

### Height:

Enter the height of the image.

**Note:** The size and the position of the image can be roughly entered in the program monitor by simply moving the image into it and dragging on the [handles](#)

**Maximize:** The image will be maximized according to the [movie](#)'s resolution.

### Set original size:

The image will be scaled to its original size.

### Retain proportions:

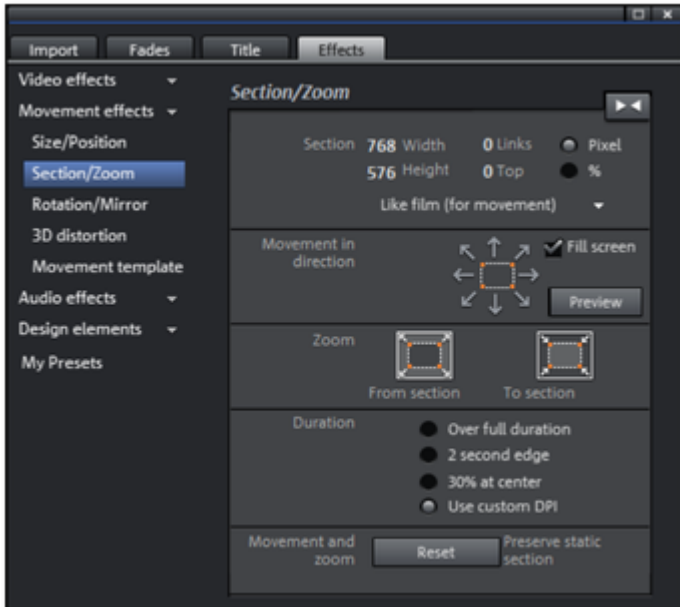
This option makes sure that the image will not be stretched or distorted. The proportions of width to height will remain the same.

**Edit:** In the "Edit" mode you can change the position and size of the [image](#) using [handles](#) that can be displayed or hidden.



The [frame](#) of the video monitor can be moved with the keyboard.  
 Nudge the screen 1 pixel:                      Arrow keys  
 Nudge the screen 5 percent:                Shift + arrow keys

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- display just one section of the photo.
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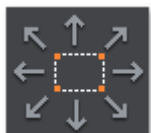


Alternatively, both buttons can be used to specify the section.

**Keep proportions:** In this [menu](#)

, you can select the format for the section. The format of the original picture is used as the default.

### Movement in direction



Determine the direction in which the selected section or [image](#) will move during the time indicated under "duration". In addition to horizontal and vertical movements, diagonal movements are also possible.

### Fullscreen

: If this check box is active, the opened section will zoom to fullscreen. If this option is switched off, it won't be possible to add movement to the section.

### Preview

: Displays a preview of the section at the playback marker location.

## Direction and time



### **Zoom in**

: The entire picture is displayed and then zoomed to show only a smaller picture section according to the time set in "Length of movement". If no portion is previously set, a central portion of 50% of the picture is set.



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: The selected picture section is displayed and is then zoomed out to display the entire picture according to the time set in "Time period". If no portion is previously set, a central portion of 50% of the picture is set.

## Direction and time

The value specified here determines the position at which the keyframes for the corresponding movement effect are set as standard. They determine the positions at which the pan start and stops.

**Note:** Automatically placed keyframes can be edited retroactively, and the option will then be set to "User defined". Read the section "[Changing an effect's keyframes](#)" in the chapter "[Animating objects](#)".

## Movement & zoom



### **Reset:**

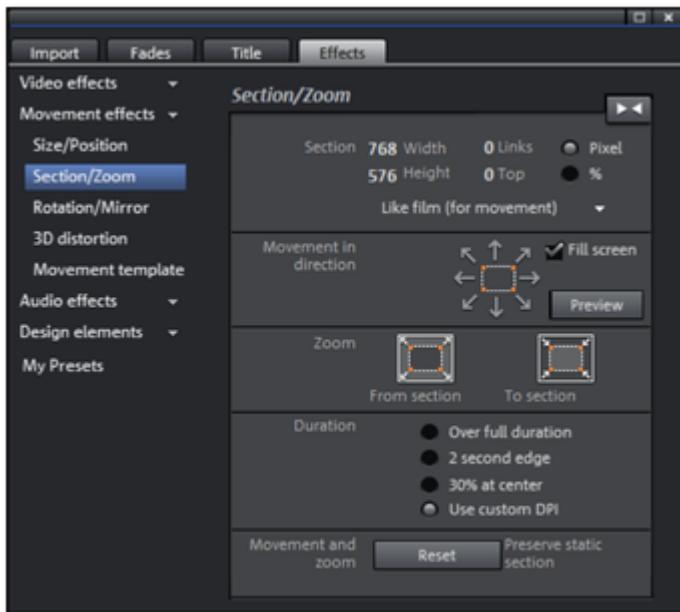
This option applies a static zoom to show the selected section of the picture only.

The [frame](#) of the video monitor can be moved with the keyboard.

Nudge the screen 1 pixel:                      Arrow keys

Nudge the screen 5 percent:                Shift + arrow keys

# Camera movement



## Cutaway

Cropped cutaways can be used to:

- display just one section of the photo.
- to move the clip through the picture with the help of a movement effect ? the result is a type of camera movement. Please read more on this in the next chapter, "Movement".

In the program monitor, you can set a picture section to serve as the basis for the movement effect. Press the left mouse [button](#) and drag out the section you want to use.

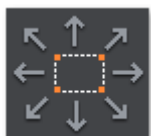


Alternatively, both buttons can be used to specify the section.

**Keep proportions:** In this [menu](#)

, you can select the format for the section. The format of the original picture is used as the default.

## Movement in direction



Determine the direction in which the selected section

or [image](#)

will move during the time indicated under "duration". In addition to horizontal and vertical movements, diagonal movements are also possible.

## Fullscreen

: If this check box is active, the opened section will zoom to fullscreen. If this option is switched off, it won't be possible to add movement to the section.

## Preview

: Displays a preview of the section at the playback marker location.

## Direction and time



### Zoom in

: The entire picture is displayed and then zoomed to show only a smaller picture section according to the time set in

"Length of movement". If no portion is previously set, a central portion of 50% of the picture is set.



### **Zoom out**

: The selected picture section is displayed and is then zoomed out to display the entire picture according to the time set in "Time period". If no portion is previously set, a central portion of 50% of the picture is set.

## **Direction and time**

The value specified here determines the position at which the keyframes for the corresponding movement effect are set as standard. They determine the positions at which the pan start and stops.

**Note:** Automatically placed keyframes can be edited retroactively, and the option will then be set to "User defined". Read the section "[Changing an effect's keyframes](#)" in the chapter "[Animating objects](#)".

## **Movement & zoom**



### **Reset:**

This option applies a static zoom to show the selected section of the picture only.

The [frame](#) of the video monitor can be moved with the keyboard.

Nudge the screen 1 pixel:                      Arrow keys

Nudge the screen 5 percent:                Shift + arrow keys

## Rotation & Mirror



This [button](#) resets all settings.

### Note:

If you animate the object using keyframes, then only the current keyframe is affected by pressing reset.

### Rotate



Rotates the [image](#) on the horizontal axis.



Rotates the image on the vertical axis.



Rotates the image around its center point.

### Straighten horizon

The [image](#) can be rotated around the axis via the [slider](#). The image is automatically zoomed to avoid black edges.

### Show guidelines

: Activating this check box displays a grid in the program monitor for orientation during horizontal straightening.

### Mirror



Mirrors the [image](#) on the vertical axis.



Mirrors the image on the horizontal axis.



Rotates the image 90° clockwise.



Rotates the image 90° counterclockwise.

### Presets

Various useful presets are located here.



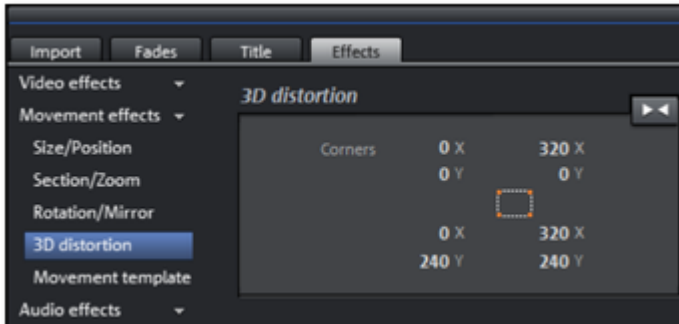
A [dialog](#) opens for opening presets from other folders.



Save your own settings as a preset.

## 3D distortion

This makes real 3D positioning of images possible, letting you distort the [image](#) in space and move it. Enter the individual corner points numerically or move them in the program monitor using the mouse.



This [button](#) resets all settings.

## **Animation**

Nearly all preset effects may be automated or animated. To animate effects or produce movements, please read the "[Animating objects](#)" chapter.



# Video effect plug-ins

Additional effects may be loaded into MAGIX Video Pro X2 in the form of video effect plug-ins. Video effects plug-ins are additional programs of third-party manufacturers that can be used to add additional video effects to video objects. You can use them to extend the comprehensive effects selection of MAGIX [Movie](#)

Edit Pro 16 even further.

MAGIX Movie Edit Pro 16 supports the [plug-in](#) format of the freeware video editing [software](#) "VirtualDub", as well as the "VitaScene" and "Adorage" program by "proDAD". A selection of tested VirtualDub plug-ins (.vdf files, also called VirtualDub filters) and Adorage plug-ins can be downloaded as an installer package directly from within MAGIX Movie Edit Pro 16.

Important examples of using plug-ins are, for instance, removing channel logos, disturbances or adding special effects.

In this section:

[Using video effect plug-ins](#)

[Video plug-ins manager](#)

[Advanced...](#)

[Remove a channel logo with the "Logoaway" plug-in](#)

## Using video effect plug-ins

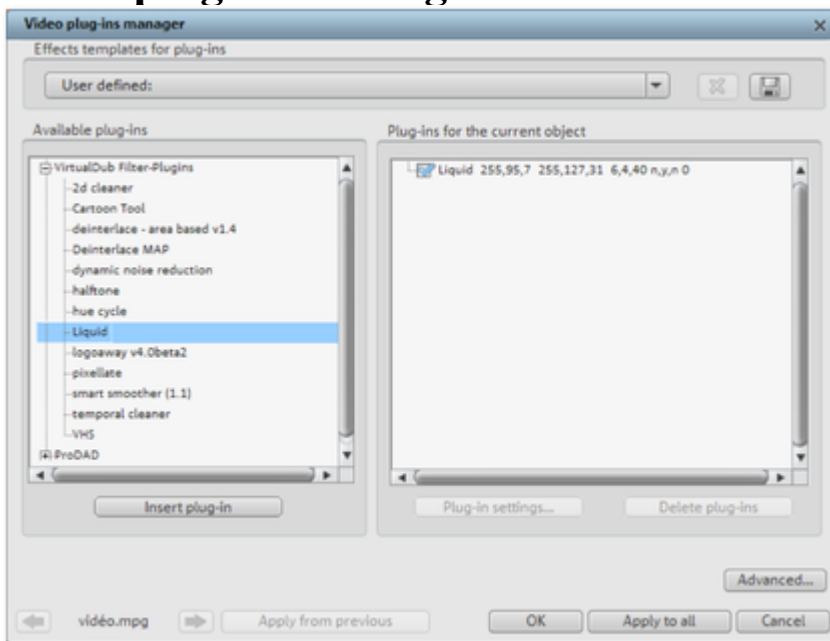
In order to be able to use plug-ins, you have to install them first. MAGIX [Movie](#) Edit Pro 16 checks whether plug-ins are already available. If not, it will offer to download them from the Internet or to manually set the [plug-in](#) path .

Note: For the included proDAD programs in the Plus version, please read the special chapter at the end of this manual!

In order to use a video effect plug-in, select the video or [image](#) object first, then open "Effects -> Video effects -> Video effects plug-ins" in the Media Pool [menu](#). It lists all available plug-ins on the right side of the [dialog](#)

.

# Video plug-ins manager



**Effect templates for plugins:** MAGIX [Movie](#) Edit Pro 16 does not include plugins due to licensing grounds. However, presets for removing the [Channel Logo](#) are provided for some TV channels with the "logoaway" [plug-in](#)



You can save your personal settings by pressing the "**Save**" [button](#) and remove them from the list by pressing the "**Delete**" [button](#)

## Available plug-ins:

Here all available plug-ins are listed.

## Add plug-in:

The selected plug-in is added to the editing chain (plug-ins on the current object list is on the right). You can load as many plug-ins as you like simultaneously. They are then edited subsequently according to the list sequence.

## Plug-in settings:

Here you can open the settings [dialog](#) for the selected plug-in. All plug-in settings on the entire list can be saved as a preset (effect templates for plug-ins).

**Advanced:** Opens the [Advanced settings](#) dialog.

## Navigation buttons:

Unlike in the Media Pool you can switch to the previous or next movie with the navigation buttons in the lower part of the dialog of a movie.

**Apply from previous:** Uses the settings of the previously set movie. This option is only active if you are editing objects in sequence with the navigation buttons (see above).

## OK:

The adjustments made to the settings will be applied to the current movie.

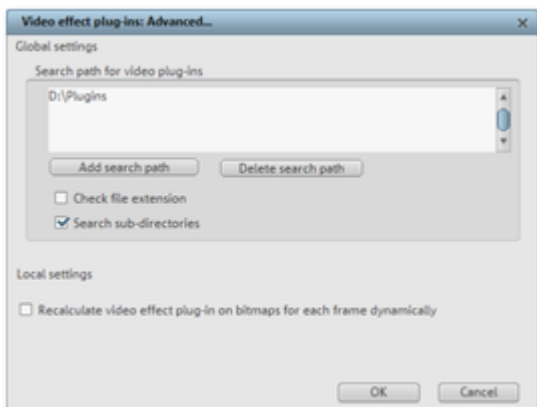
## Apply to all:

The effects will be applied to all video and picture objects in the slideshow.

## Cancel:

Closes the [dialog](#), the settings will not be applied.

## Advanced...



In the "Advanced" [dialog](#), you can specify the search path for plug-ins. MAGIX [Movie Edit Pro 16](#) checks these for available [plug-in](#) files at program start and adds these to the list of available plug-ins. "Add path" adds new search paths, and "Delete path" removes them from the list again.

### **Check for file extension only**

: Accelerates the search for new plug-ins if a larger number of plug-ins are available by not checking if they are valid.

### **Scan subfolders**

: Extends the search to subfolders below the selected paths.

### **Local settings**

**Recalculate video effects plug-in on bitmaps for each [frame](#) dynamically:** If you apply a plug-in to a bitmap ([image](#)), then this option must be activated in case the [plug-in](#) creates moving effects.

## Remove a channel logo with the "Logoaway" plug-in

The "Logoaway" freeware [plug-in](#) by Krzysztof Wojdan is a high-quality option for removing the channel logo from your video material. The plug-in attempts to remove the channel logo by reconstructing [image](#) elements using from the surrounding area.

Since each station positions its logo at a different location and in different sizes, you can select the presets for different channels from the effects templates.

**Hint:** The broadcasting rights of each channel must be observed. Commercial use of the edited material clearly constitutes a breach of [copyright](#)

# Image stabilization

The motion stabilizer reduces unsteady camera motion and helps to smooth pans. This option can be accessed from the [context menu](#) of a video object or via "Effects -> Open video objects".

## Functionality

### [Image](#)

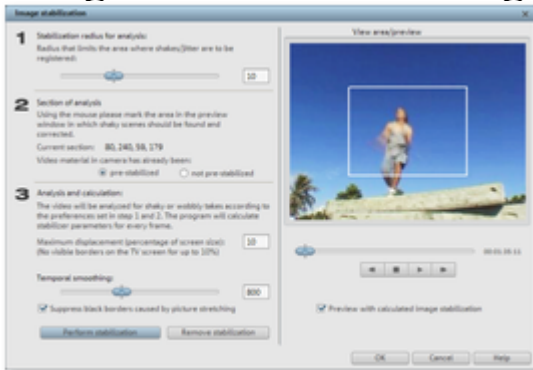
stabilization balances undesired picture movements. The motion stabilizer equalizes inadvertent movements in the image by moving the image in the opposite direction in accordance with the wrong movements. This produces unusable edges in the footage that are cut off automatically, and black strips replace the edge of the shifted picture, which are then removed using a zoom shot. The result is a clearly more stable, almost imperceptibly larger picture.

## Application

Activate the motion stabilizer in the video object FX or context menus. You will see the current video object in the preview monitor.

First, check the [movie](#) material for shaky scenes by clicking on the "Stabilize" [button](#). Based on the preset parameters, a relative shift between the pictures is calculated. After concluding the analysis, take a look at the suggested correction, then use the [slider](#) for further adjustments. Once you are happy with the final correction, click "OK". If the first scan did not provide a satisfactory result, try changing the parameters below and repeat the process.

# Image stabilization dialog



**Stabilizing radius:** To prevent the [image](#) stabilizer from recognizing every camera movement as unwanted shakiness, you can determine the radius within which movement is accepted; the larger the stabilization radius, the more shakiness is corrected. Changing this parameter will require re-analysis of the source footage.

## Analysis area

: This area determines the area of the footage that should be analyzed. The center of the image is preset. If shaking occurs in one area more than in another, then you can move the analysis area (e.g. a foreground element at the edge is especially shaky). To do this, use the mouse to "capture" the shaky area. The smaller the area, the quicker the analysis will be calculated. Generally, changing this parameter will require re-analysis of the source footage.

## Maximum movement

: Correction moves the image accordingly to the shaking movements. This means that the edge of the image will be removed. This value determines how large the edge area is which may be cut away by the stabilization feature; the smaller the value, the less movement correction. Changes to this value are immediately applied.

## Temporal smoothing

: This value determines the speed of the movements considered shaky. This allows you to differentiate between a panning shot and a nervous hand-held shot. Changes to this value are immediately applied.

**Cancel:** Exits the [dialog](#) without accepting changes to settings.

## Reset

: Resets the current settings.

# Create panorama pictures

This function will turn your photos into a sensation. Add new life to your holiday memories and create great panoramas with only a few clicks. You don't need to create only "proper" panoramas; let your imagination run wild and put together anything you want to! You'll see your photos in a new light and create stunning montages.

## Select pictures for panorama

Load all necessary images into the film [project](#) as usual. The images that should make up the panorama should be selected one after the other while holding down the "Shift" key. Select the entry "Panorama photo" from the [context menu "Effects](#)

-> Video object effects".

## Invert image sequence for panorama image

Sometimes photos are accidentally loaded in the wrong sequence or were created from left to right. If you forgot to sort your photos correctly beforehand, then simply click "Invert sequence".

## Calculating the panorama image

If you click "Create", the panorama [image](#) will be processed. Depending on the resolution and number of original images included, this may take some time. The original photos are replaced in your slideshow with the panorama image you've created, but the original files on the hard drive will remain intact.

**Hint:** You can create a panorama [image](#) from a maximum of six images. Click on "More options" for more information on the upgrade.

## Finished panorama (2 images)



Finished panorama from 2 images



# Borders

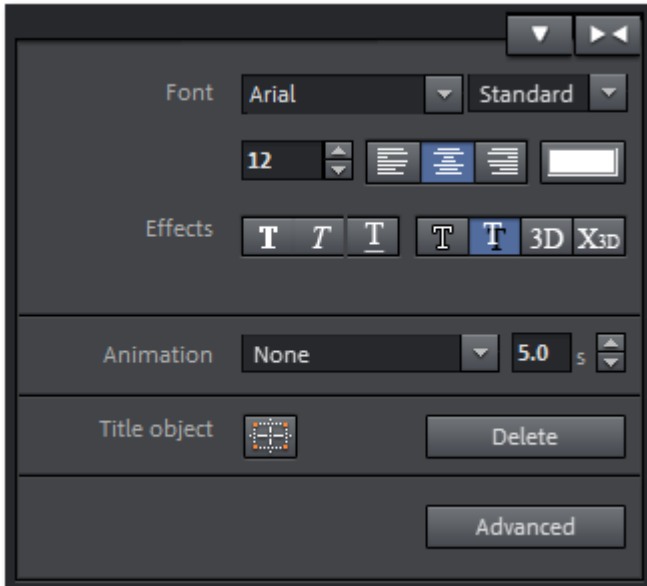
The "[Frame](#)" directory can be accessed via the [button](#) in Media Pool. There, you will find bitmap patterns for the borders of videos. These are much like picture-frames that can be modified by video mix effects. Drag them to the lowest track of the arranger and select the Bluescreen or Greenscreen effect to make the blue or green space in the middle transparent for the upper videos. This way you can see the objects of the upper tracks of the arranger in the [field](#)

You can use the lower [handles](#) to adjust the size of the borders to fit any length of the video. This allows you to add a [frame](#) to a video from start to end. You can also achieve interesting effects by inserting and discarding borders within a video.

# Title Editor

Titles can be used for many applications: as a running text (ticker), subtitles, speech and thought bubbles, to display date and time, and much more.

**T** The [button](#) in the [toolbar](#) opens the Title Editor.



Enter text, e.g. for subtitles, lead or end credits in the video monitor. Texts can be displayed in all kinds of fonts and colors.

If you want to format individual words or letters, select them with the mouse and choose a different format or color. If no selection is made, the entire text will be formatted.

In this section:

[Creating titles from a template](#)

[Creating titles without a template](#)

[Edit title](#)

[Advanced Title Editor settings](#)

[3D text](#)

[Add time code](#)

## Creating titles from a template

The Media Pool includes the tab "Title" beside the entry "General", and this features additional, thematically named title templates.

- Open one of these entries and select any title template. A simple mouse-click provides a preview, and double-clicking creates a title object using the template.

### **Note**

: Templates may be applied to an existing title object. Settings outside of the text will be lost!

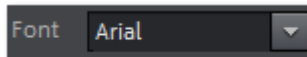
## **Creating titles without a template**

- Try clicking on the entry "General" under "Title" in the Media Pool.
- Next, click in the video monitor on the location where the title should be positioned.
- Next, simply enter the text via your keyboard.
- After the text has been entered, click the check mark to confirm your entry.

## Edit title

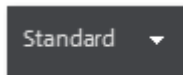
- Click again on the title in the video monitor window or the title object in "Timeline" mode.
- Now change the text however you like.
- Confirm your entry by clicking the check mark next to the positioning [frame](#).

## Font



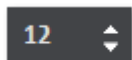
### Font

: Select the font here that should be displayed for the text.



### Font style

: Choose here whether all of the text or parts of it should be shown bold, in italics, or underlined.



### Font size

: Set the size of the text here.



**Direction:** Choose here whether the text should be justified to the left, centered, or to the right within the positioning [frame](#).



**Color:** Press this [button](#) to choose the font color.

## Effects



### Font style

: Choose here whether all of the text or parts of it should be shown bold, in italics, or underlined.



**Outline/shadow/3D:** This function allows you to add shadows, 3D effects, and an outline to the text. These settings can be adjusted in detail via "**Advanced**".

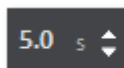


The X3D [button](#) converts the title object into a Xara 3D text object. More about Xara 3D text objects is described in the section "[3D text](#)".

## Animation



You can make your credits scroll down the screen, and many other text movements and effects and designs are also available.



The display duration for the subject can be set here.

Templates for animated text are arranged in the other Media Pool categories; the icon and the description are there to help you find the correct settings.

## Title object



### **Center position**

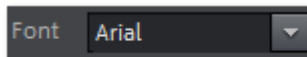
: Clicking "Center position" puts the title back in the middle.



### **Delete**

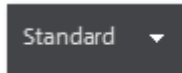
: The whole title object, i.e. text and settings, will be deleted.

## Font



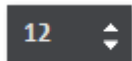
### Font

: Select the font here that should be displayed for the text.



### Font style

: Choose here whether all of the text or parts of it should be shown bold, in italics, or underlined.



### Font size

: Set the size of the text here.



**Direction:** Choose here whether the text should be justified to the left, centered, or to the right within the positioning [frame](#).



**Color:** Press this [button](#) to choose the font color.

## Effects



### Font style

: Choose here whether all of the text or parts of it should be shown bold, in italics, or underlined.

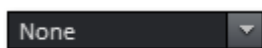


**Outline/shadow/3D:** This function allows you to add shadows, 3D effects, and an outline to the text. These settings can be adjusted in detail via "**Advanced**".

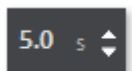


The X3D [button](#) converts the title object into a Xara 3D text object. More about Xara 3D text objects is described in the section "[3D text](#)".

## Animation



You can make your credits scroll down the screen, and many other text movements and effects and designs are also available.



The display duration for the subject can be set here.

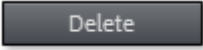
Templates for animated text are arranged in the other Media Pool categories; the icon and the description are there to help you find the correct settings.

## Title object



### Center position

: Clicking "Center position" puts the title back in the middle.



**Delete**

: The whole title object, i.e. text and settings, will be deleted.



## Effects



### Font style

: Choose here whether all of the text or parts of it should be shown bold, in italics, or underlined.



**Outline/shadow/3D**: This function allows you to add shadows, 3D effects, and an outline to the text. These settings can be adjusted in detail via "**Advanced**".

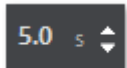


The X3D [button](#) converts the title object into a Xara 3D text object. More about Xara 3D text objects is described in the section "[3D text](#)".

## Animation



You can make your credits scroll down the screen, and many other text movements and effects and designs are also available.



The display duration for the subject can be set here.

Templates for animated text are arranged in the other Media Pool categories; the icon and the description are there to help you find the correct settings.

## Title object



### Center position

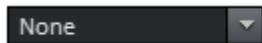
: Clicking "Center position" puts the title back in the middle.



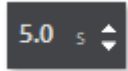
### Delete

: The whole title object, i.e. text and settings, will be deleted.

## Animation



You can make your credits scroll down the screen, and many other text movements and effects and designs are also available.



The display duration for the subject can be set here.

Templates for animated text are arranged in the other Media Pool categories; the icon and the description are there to help you find the correct settings.

## Title object



### Center position

: Clicking "Center position" puts the title back in the middle.



### Delete

: The whole title object, i.e. text and settings, will be deleted.

## Title object



### **Center position**

: Clicking "Center position" puts the title back in the middle.



### **Delete**

: The whole title object, i.e. text and settings, will be deleted.

# Advanced Title Editor settings

## Options

**Only use visible TV area:** The text will be zoomed so that it will always be within the TV's limits, which is specified in the [Movie effect settings](#)

## Background

Specify here whether the text's background should appear black or white. This is only meaningful if no other video or [image](#) object is in the background.

## Text effects

Edit different text effects in detail. One color may be set for each effect.

**Shadow:** The position of the shadow may be set on the horizontal and vertical axes.

**Transparency** makes the background "shine through" more or less.

## Soften

makes the edge of the shadow harder or softer.

**Outline:** A border appears around the letters in the text.

A filled outline appears in the color selected, i.e. as a line in the set width.

If the option is deactivated, then the color of the outline will match the text color; the color of the outline is selected here.

## 3D

: The text appears with a 3D-style outline. The width and thickness of the 3D contour (H) can be set in points.

## 3D text

3D text can be created directly from the Title Editor. Click the Title Editor and then press the "X3D title" [button](#)

. The title object will now be turned into a MAGIX 3D object. If you have also installed MAGIX 3D Maker, the program will open for you to work on the text.

Presets are also located in the Media Pool under "Titles -> 3D". You can enter or process text here.

For more information about MAGIX 3D Maker, try the help file. You can open it by pressing "F1" from within the program.

## Add time code

MAGIX [Movie](#) Edit Pro 16 can add a time or date ("timecode") to the picture material. To add a timecode, right click on the video object and choose the "Fade in date as title" option from the [context menu](#)

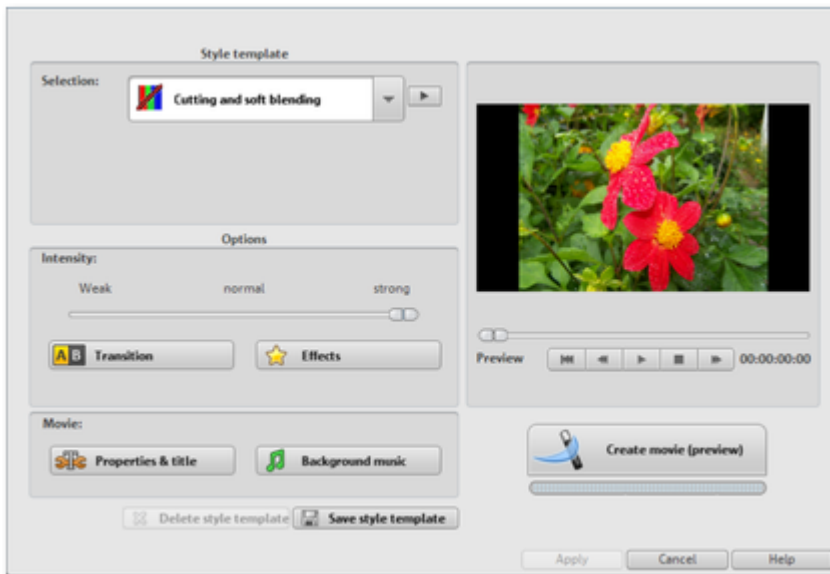
- If you're using a DV-[AVI](#) file (a digital recording from a camcorder, for instance), then the recording date will be used from the selected section.
- If you're using a different file, the creation date will be used as the timecode.

The title editor is then opened in order to customize the entry.

# Slideshow Maker

Slideshow Maker is ideal for converting still images into moving pictures, adding background music, and effects.

Open Slideshow Maker via "File -> Edit -> Wizards".



In this section:

[Style template](#)

[Intensity](#)

[Transitions](#)

[Effects](#)

[Properties & title](#)

[Background music](#)

[Create movie](#)

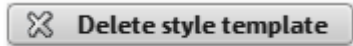
## Style template

Select a template that best matches your needs.

### Save/delete style template



Style templates you have created yourself appear in the list of included style templates when you use the default folder provided as a save location.



If you like, these can be deleted again.



## **Intensity**

Controls the portion of video and [image](#) objects that feature effects.

## Transitions

The different sliders are used to set the portion of individual fade types.

### **3D / Other: Details**

activates effects or fades in the corresponding category. The arrow below the preview monitor plays a preview.

### **Fade duration**

: Set the length of the fades in seconds.

### **Random fades**

: The fades are set to random values.

## Effects

The faders enable the respective effects types to be specified. **Details** activates effects or fades in the corresponding category. The arrow below the preview monitor plays a preview.

**Treat special [image](#) formats intelligently:** Panoramas and portrait photos can be treated "intelligently". If this option is activated, then panoramas and portraits will be treated with special effects adjusted to the format. These effects can also be selected in the detail view.

If this option is selected, then these images will use the same effects as all other images.

### **Random effects**

: The faders that control the amount of effects are set randomly.

## Properties & title

In this section:

[Film length](#)

[Including video objects](#)

[Opening and closing credits](#)

[Group associated recordings together](#)

## **Film length**

### **Resulting film length**

: This is an estimation of how long the film will be after applying Slideshow Maker.

**Available music:** This is the complete length of the music that is currently selected. [Background music](#) enables detailed settings for the pieces of music to be used.

### **Adjust film length to the music**

: An attempt is made to adjust the length of photo objects to the background music. If the film is too short the music will be cut off. If the film is too long, the music will repeat.

**Adjust music length to the film:** Photo objects have a set length, and the resulting film is filled with music. The music at the end of the [movie](#) is simply faded out.

## **Including video objects**

### **Process videos**

: If this option is set, then videos will be automatically processed with effects and transitions.

### **Length**

: Settings may be made here about whether the original length of the video should be maintained or if it should be shortened.

## Opening and closing credits

Set the text for opening and closing credits here.

### **Text**

: Enter the corresponding text for opening and closing credits that should be added by Slideshow Maker.

**File:** A title template, a video, or an [image](#) file may also be used.

**Note:** Titles created using Slideshow Maker may also be [edited](#) at any time.

## **Group associated recordings together**

If this option is active, an attempt is made to detect associated events via their date information and to separate them from each other optically. Detection of individual events is based on the time span of these events to achieve a sensible separation.

### **Begin group with black fade**

:A black fade is added between the different events.

### **Begin group with title and black fade**

:A black fade is added between the different events. A title is also faded in with a suitable duration, e.g. 1st/2nd/3rd day, provided the events take place over multiple days.

### **Begin group with title and picture**

:A black fade is added between the different events. A title is also faded in with a suitable duration after the black fade, e.g. 1st/2nd/3rd day, provided the events take place over multiple days.



## Background music

Specify here whether and which music should be used for the background.

### Use background music

: Adds background music.

### Load file(s):

 A file selection [dialog](#)

will open to choose a folder with pieces of music where you can select one or multiple files.

### Remove

: The selected pieces are removed from the list and will not be used.

### Preview

: Previews the selected piece of music.

### Volume:

 This [slider](#)

controls the volume ratio between the original sound and the background music.

### Tip

: Pieces of music in the first track are listed and used for the background music, provided they are not removed.

## Create movie



After all of the important settings have been made, click this [button](#) to produce the film.

If the results do not match what you imagined, then click "**Cancel**" to discard the changes. Otherwise, you can change the settings again or select another style template and click "**Create film**".

# Master effects

All of the settings made here influence the entire [movie](#). Settings are made separately for each individual movie in the [project](#). You can open the effects from the the settings via the "Effects" [menu](#)

On the right, you'll see a preview of the current settings. Use the position [slider](#) to jump to different positions in the movie or to various scenes in order to see how the selected setting affects the [image](#) material.

In this section:

[Brightness/Contrast](#)

[Color](#)

[Sharpness](#)

[TV picture](#)

## Brightness/Contrast

**Brightness/Contrast:** Use the faders to increase or reduce the brightness and contrast of the [image](#)

**Selective brightness (gamma):** "Gamma" sets the middle gray value transmitted from various color areas. In the presets [menu](#) you can determine which color areas should be used. Using the [fader](#) you can also set the intensity of the brightness or darkness.

### **Color space correction (master effect):**

This option combats colors that are too strong and cannot be properly displayed on your TV. The color saturation of the photos in question are "turned down" to the maximum level at which they can be properly displayed.

## Color

**Saturation:** Use the saturation [slider](#) to increase or reduce the hue proportions in the [image](#). A newly developed algorithm is now applied that carries out color changes in relation to other parameters (e.g. contrast settings) to achieve the most natural coloring possible. With just a little bit of experimentation, you can achieve the most astounding results ? anything from turning summer snapshots into autumnal scenes to funky pop art...

### **Hue**

: Use the palette to select a hue for coloring the picture.

**Red/Green/Blue:** The "Red/Green/Blue" [slider](#) corrects the color proportion mix.

## Sharpness

This [fader](#) allows you to regulate the level of [image](#) sharpness.

The "fine tuning" option allows you to determine the level of focus for particular surfaces or borders.

## TV picture

This option ensures that the [image](#) size is adapted to fit the real television picture (anti-cropping). Without adjustment, the television might otherwise crop the image borders.

### **Fade in TV display area in the preview monitor:**

This option displays the image borders of the television as lines in the preview monitor. The four image borders of the TV display area can be set by means of the 4 input fields. In this case, it is necessary to know the actual size of the TV picture. To determine it, proceed as follows:

The four image margins can be proportionally adjusted by means of the four input fields. Here it is important to find the optimal balance between distortion, reduction, bar formation and image cropping:

- If the same value is entered for every margin, the image size is reduced proportionally. In this case no distortions will occur, but there will be bars along the edges.
- If different values are entered for the 4 fields, the image size is reduced disproportionately. This causes image distortion.

### **Apply margin to:**

With this option the entered values for the four margins are applied as an image reduction. The result can immediately be viewed on the preview monitor.

### **Determining the visible TV [frame](#) size**

To determine the picture properties of your television as well as optimal image size editor settings, you should perform a test run.

1. Load the **Visible TV** picture.mvm film from the "My projects > visible TV picture" folder in Media Pool.
2. Play back the film and read the instructions on the video screen.
3. Copy the slideshow to CD or DVD.
4. Place the disc into your player and play back the film. Compare the TV picture to the picture displayed on your video screen by MAGIX [Movie](#) Edit Pro 16.
5. Determine the proportional value of the borders cropped by the television with the 4 measurement scales along the edges of the test picture.
6. Enter the values in the "Full TV size" editor.

The [image](#)

size is now optimized to your TV picture. Please note: Depending on device settings and disc carrier type, the cropping values may vary slightly.

## TV picture

In the [context menu](#)

or in the Effects > Video object effects you will find various adjustments for various specifics of the TV picture.

Next to the [interlace](#) and anti-flickering filter in the object properties, you will find the option to adjust the [image](#)

to the real proportions of the TV picture. A special algorithm ensures an optimal ratio between image size and image borders (anti cropping).

### **Interpolation for interlace source material:**

Select this option to remove ridge structures from the (video) image. If, for instance, you extract freeze frames from a video, these ridge structures appear in image sections showing movement.

### **Anti-flicker filter:**

Select this option for freeze frames with very fine structures and high contrast. This filter reduces line flickering during TV playback.

**Border cropping - [offset](#):** Select this option if the edges are cropped during playback on your television.

Values stored in ["Film effect settings"](#) will be applied.

# Audio Effects

In this chapter

[Load audio effects from the Media Pool](#)

[Using audio effects](#)

[Control Effect devices](#)

[Sound optimization](#)

[Audio effect dialogs](#)

[Audio effects in the mixer](#)

[MAGIX Mastering Suite](#)

[Automatic track damping](#)

## Load audio effects from the Media Pool

In „Effects" > „[Audio](#)

effects" you find several audio effects you can drag & drop onto the audio object. A preview is played by double clicking the effect.

Another advantage of this so-called "object-oriented" working method is that automations are moved automatically with objects when they are moved, since they are attached to the object and not to the track itself.

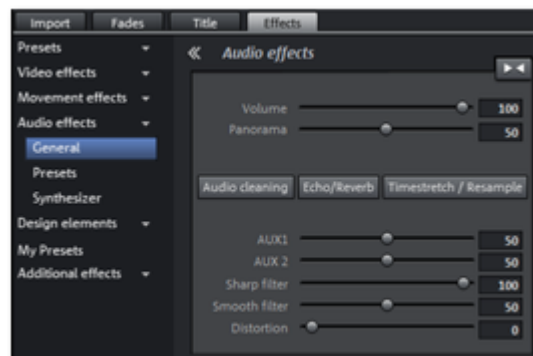
### General

Under "Effects ->

[Audio](#) effects ->

General", you will find audio effects that can be animated using [effects curves](#)

. This means that certain effect settings can be changed during playback.



Effect curves are always object related, i.e. they only apply to one object and are moved or copied together with the object.

#### Note

: The faders AUX 1 and AUX 2 control the volume at which the object's signal is sent to the corresponding FX tracks in the mixer.

[Audio Cleaning](#), [Echo/Reverb](#), and [Timestrech/Resample](#) can also be accessed here.

#### Note

: Volume and balance curves are also present in the track. The set values in the curve are also active, respectively.

### Audio effects presets

Under "Effects -> [Audio](#) effects -> Audio effects presets", you'll find a broad palette of effects settings which you can add to [audio](#)

objects via drag & drop. A preview can be played back by double-clicking the object corresponding preset.

### Synthesizer

Synthesizers in MAGIX [Movie](#)

Edit Pro 16 can be loaded as individual objects. This is less of an effect than a technical means of producing your own sound effects. More information is available in "Synthesizers".



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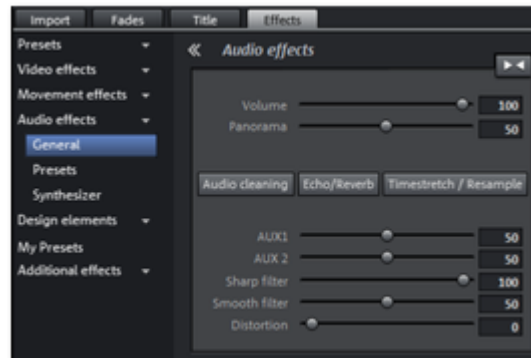
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# Using audio effects

## Track effects

Besides [audio](#)

effects in the object (audio cleaning, reverb/echo, timestretch/resample, Surround, etc.), a separate track effects rack with equalizer, reverb/echo, compressor as well as plug-ins can be used in each mixer track.



The plug-ins are loaded via the plug-ins slot.



You can open the track audio effects rack with the FX [button](#)

A light blue track FX [button](#)

indicates that effects are active in the track.

Track effects always affect all audio objects of a track, for instance, they also affect individual record takes of an audio recording.

## Master effects

Master effects influence the mixed sum of all audio tracks. For this purpose a Master Audio Effects Rack and further plug-ins are provided. The [MAGIX Mastering Suite](#) is also available to help produce perfect sound.

## Note

: This saves storage space as opposed to applying an effect to each object individually. Object effects, on the other hand, that are only calculated for the affected object are played back to save computing power.

## Control Effect devices

The effects are controlled in the conventional way by the use of [slider](#) controls, turning knobs, buttons or using graphic sensor fields.

**Sensor fields:** Sensor fields can be intuitively used with mouse movement to move the sound of the [audio](#) and the respective effect settings change according to the mouse movement. For every effect, two settings are simultaneously affected within the sensor fields (such as echo delay and feedback).

**Power:**

Every effects device in the rack can be separately switched on or off.

**Reset:** Every effect has a reset [button](#)

that restores the effect device's initial default (off). The effect is not calculated into the sound, and the effect is not rendered.

**Preset:** Each effects device is equipped with a selection of presets are selected through the dropdown [menu](#)

**Bypass:** Some effects are equipped with a bypass [button](#)

which bypasses the effects device. The bypass button allows you to directly compare the neutral, unedited sound of the audio object with the effects setting you have chosen.

**A/B:** Similar to the bypass button, the A/B button also compares two settings with each other. If you have selected a preset for the effect and make manual changes to it later, you can compare the original preset sound with the new settings by using the A/B [button](#)

## Sound optimization

This option opens an editor for correcting [audio](#) material discrepancies.

Select the cleaning function you desire from the upper part of the [dialog](#)

:

- The [equalizer](#) allows you to manipulate the frequency spectrum ? perfect for cleaning up muffled dialog.
- The [compressor](#) is a dynamic volume control that lends the overall sound a deeper, richer quality.
- The [stereo FX processor](#) justifies the position of the sound in the stereo panorama.
- DeNoiser, [DeClipper](#), and [DeHisser](#) are professional noise reduction tools that do exactly what their titles say they do.

**Presets:** You can try out the suitability of a number of presets in the preset [menu](#)

.

### Temporarily deactivate all effects:

Switches all the effects off.

**Apply to all scenes:** Applies the selected cleaning settings of all effects to every [scene](#) of the [movie](#)

.

## DeClipper

Should the input level of an [audio](#)

recording be too high, then overmodulation (digital distortion) may result at the loudest parts (the signal peaks). This digital distortion can also be called "clipping". At the overmodulated area, the values that are too high are simply cut off, and the typical, quite unpleasant sounding crackling distortions are heard.

MAGIX [Movie](#)

Edit Pro 16 contains a special function for dealing with digital clipping and analog distortions.

Using the [fader](#), you can set at what level the DeClipper should register a signal as being overmodulated and, if required, correct it ([clip level](#)

). This is important, since different sound cards show different clipping methods. The more the fader is turned up, the lower the level recognized by the program as overmodulated. If the clip level is set too high, unwanted sound modification may occur.

**Get [clip level](#):** The [clip level](#) is gauged automatically.

## DeNoiser

The DeNoiser removes persistent background noise like computer hum, hissing, noises from sound charts, disturbance from ground circuits, interference from [audio](#) equipment with high-impedance outputs (such as record players), impact noise, or the turntable rumble. The DeNoiser requires a [noise sample](#). Some typical noise sounds are included in the "Preset" selection [menu](#)

.

Set the degree to which the noise should be reduced with the [fader](#)

. It is often better to reduce interference signals by 3-6 dB rather than as much as is possible in order to keep the sound "natural".

A different option consists of creating a noise sample yourself. All that's needed is a short section from the audio track in which the distortion can be found. To get it, switch to the DeNoiser [dialog](#) by pressing "Advanced

".

## DeNoiser – Advanced settings

### **Step 1: Choose a [noise sample](#)**

First of all, a sample of the distortion you wish to remove must be selected, i.e. a so-called "noise sample".

You have two options to choose from:

**Pick out typical background noise:** You can select and use a number of typical background noises from the [flip menu](#). Select one and listen to it by pressing the "Play" [button](#)

. If it is similar to the background noise in your sound track, go ahead and use it (see "Step 2: Removing background noise").

**Extract a new noise sample from an [audio track](#):**

You can also pick out a short passage (from the existing sound track) in which you can hear the background noise.

**Automatic search:**

Searches especially quiet passages in which background noise is most noticeable.

**Previous / Play / Next:**

These buttons allow you to play all of the passages found for easy comparison.

**Save as:** Once found, you can save noise samples to the hard drive. They then appear as entries in the "Typical background noises" [flip menu](#)

to be used in other projects.

If you only wish to use the noise sample in the current [project](#)

, you don't have to save. Instead just go to the "Remove noise" category.

### **Step 2: Removing background noise**

**Noise level:**

The level of the noise reduction function should be set as precisely as possible. Values that are too low are expressed at a low distortion dampening level and in artifacts, like noises or "twittering" (see below). High settings produce dull results ? useful signals that sound similar to hissing noises are also filtered away. Try to find the best setting for the project at hand.

**Reducer:**

This sets the balance between the original signal and the signal with the applied noise reduction. It's often better to reduce interference signals by 3-6 dB rather than as much as is possible, so as to keep the sound "natural". In case of buzzing, it's best to apply complete removal.

### **Dehisser**

The DeHisser eliminates regular "white" noise typically produced by analog tape recordings, microphone pre-amplifiers, A/D converters, or transformers.

Noise reduction can be regulated in decibels with the [fader](#)

. It is often better to reduce interference signals by 3-6 dB rather than as much as possible in order to keep the sound "natural".

**Noise level:**

You can choose between different noise levels. The level of the noise reduction function should be set as precisely as possible. Low settings result in incomplete deletion of the hissing. Incomplete deleting of hissing produces artifacts and should be avoided, since high settings will produce dull results and some useful signals (i.e. woodwinds) which are similar to hissing are also filtered away.

### **Equalizer**

The 10-track equalizer divides the frequency spectrum into 10 areas (tracks) and supplies them with separate volume controls to allow you to achieve many impressive effects, from the simple rising of the bass to total sound transformation. If you raise the low frequencies too much throughout the whole level, it might cause distortions.

**Fader:**

The volume of each of the 10 frequency bands can be set separately with the 10 volume controls.

**Link frequency bands:**

The frequency fields can be bundled together flexibly in order to avoid artificial-sounding exaggeration in individual frequency fields.

**Compressor**

The compressor is essentially an automated dynamic volume control tool. Pitch dynamics are limited, loud passages stay loud, and low passages become louder. Compression is often used to make the material more powerful, particularly for bass recordings and vocals, but also as master effects in the mixer for adding to the overall sound.

**Ratio:**

Regulates the compression ratio.

**Function:**

Defines the compressor's mode of operation depending upon the sound material.

**Stereo FX**

The stereo FX processor provides adjustment of the alignment of the [audio](#) material in the stereo balance. If the stereo recordings sound weak and undifferentiated, an extension of the stereo base width can often provide better transparency.

**Bandwidth control:**

Adjust the bandwidth between mono (on the extreme left), unchanged base width (center) and maximum bandwidth ("wide" on the extreme right).

Reducing the bandwidth can raise the overall level. In extreme cases, when the left and the right channels include identical material and the bandwidth control is pushed to the extreme left on "mono", the result can be a level increase of 3 decibels.

Raising the bandwidth (values of 100) diminishes the mono compatibility.

## DeClipper

Should the input level of an [audio](#) recording be too high, then overmodulation (digital distortion) may result at the loudest parts (the signal peaks). This digital distortion can also be called "clipping". At the overmodulated area, the values that are too high are simply cut off, and the typical, quite unpleasant sounding crackling distortions are heard.

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Edit Pro 16 contains a special function for dealing with digital clipping and analog distortions. Using the [fader](#), you can set at what level the DeClipper should register a signal as being overmodulated and, if required, correct it ([clip level](#)). This is important, since different sound cards show different clipping methods. The more the fader is turned up, the lower the level recognized by the program as overmodulated. If the clip level is set too high, unwanted sound modification may occur.

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Set the degree to which the noise should be reduced with the [fader](#).

. It is often better to reduce interference signals by 3-6 dB rather than as much as is possible in order to keep the sound "natural".

A different option consists of creating a noise sample yourself. All that's needed is a short section from the audio track in which the distortion can be found. To get it, switch to the DeNoiser [dialog](#) by pressing "Advanced".

## DeNoiser – Advanced settings

### Step 1: Choose a [noise sample](#)

First of all, a sample of the distortion you wish to remove must be selected, i.e. a so-called "noise sample".

You have two options to choose from:

**Pick out typical background noise:** You can select and use a number of typical background noises from the [flip menu](#). Select one and listen to it by pressing the "Play" [button](#).

. If it is similar to the background noise in your sound track, go ahead and use it (see "Step 2: Removing background noise").

### **Extract a new noise sample from an [audio track](#):**

You can also pick out a short passage (from the existing sound track) in which you can hear the background noise.

### **Automatic search:**

Searches especially quiet passages in which background noise is most noticeable.

### **Previous / Play / Next:**

These buttons allow you to play all of the passages found for easy comparison.

**Save as:** Once found, you can save noise samples to the hard drive. They then appear as entries in the "Typical background noises" [flip menu](#) to be used in other projects.

If you only wish to use the noise sample in the current [project](#), you don't have to save. Instead just go to the "Remove noise" category.

## **Step 2: Removing background noise**

### **Noise level:**

The level of the noise reduction function should be set as precisely as possible. Values that are too low are expressed at a low distortion dampening level and in artifacts, like noises or "twittering" (see below). High settings produce dull results ? useful signals that sound similar to hissing noises are also filtered away. Try to find the best setting for the project at hand.

### **Reducer:**

This sets the balance between the original signal and the signal with the applied noise reduction. It's often better to reduce interference signals by 3-6 dB rather than as much as is possible, so as to keep the sound "natural". In case of buzzing, it's best to apply complete removal.

## **Dehisser**

The DeHisser eliminates regular "white" noise typically produced by analog tape recordings, microphone pre-amplifiers, A/D converters, or transformers.

Noise reduction can be regulated in decibels with the [fader](#)

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You can choose between different noise levels. The level of the noise reduction function should be set as precisely as possible. Low settings result in incomplete deletion of the hissing. Incomplete deleting of hissing produces artifacts and should be avoided, since high settings will produce dull results and some useful signals (i.e. woodwinds) which are similar to hissing are also filtered away.

## **Equalizer**

The 10-track equalizer divides the frequency spectrum into 10 areas (tracks) and supplies them with separate volume controls to allow you to achieve many impressive effects, from the simple rising of the bass to total sound transformation. If you raise the low frequencies too much throughout the whole level, it might cause distortions.

### [Fader:](#)

The volume of each of the 10 frequency bands can be set separately with the 10 volume controls.

### **Link frequency bands:**

The frequency fields can be bundled together flexibly in order to avoid artificial-sounding exaggeration in individual frequency fields.

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The compressor is essentially an automated dynamic volume control tool. Pitch dynamics are limited, loud passages stay loud, and low passages become louder. Compression is often used to make the material more powerful, particularly for bass recordings and vocals, but also as master effects in the mixer for adding to the overall sound.

### [Ratio:](#)

Regulates the compression ratio.

### **Function:**

Defines the compressor's mode of operation depending upon the sound material.

## **Stereo FX**

The stereo FX processor provides adjustment of the alignment of the [audio](#) material in the stereo balance. If the stereo recordings sound weak and undifferentiated, an extension of the stereo base width can often provide better transparency.



**Bandwidth control:**

Adjust the bandwidth between mono (on the extreme left), unchanged base width (center) and maximum bandwidth ("wide" on the extreme right).

Reducing the bandwidth can raise the overall level. In extreme cases, when the left and the right channels include identical material and the bandwidth control is pushed to the extreme left on "mono", the result can be a level increase of 3 decibels.

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The DeHisser eliminates regular "white" noise typically produced by analog tape recordings, microphone pre-amplifiers, A/D converters, or transformers.

Noise reduction can be regulated in decibels with the [fader](#)

. It is often better to reduce interference signals by 3-6 dB rather than as much as possible in order to keep the sound "natural".

### **Noise level:**

You can choose between different noise levels. The level of the noise reduction function should be set as precisely as possible. Low settings result in incomplete deletion of the hissing. Incomplete deleting of hissing produces artifacts and should be avoided, since high settings will produce dull results and some useful signals (i.e. woodwinds) which are similar to hissing are also filtered away.

## Equalizer

The 10-track equalizer divides the frequency spectrum into 10 areas (tracks) and supplies them with separate volume controls to allow you to achieve many impressive effects, from the simple rising of the bass to total sound transformation. If you raise the low frequencies too much throughout the whole level, it might cause distortions.

### **Fader:**

The volume of each of the 10 frequency bands can be set separately with the 10 volume controls.

### **Link frequency bands:**

The frequency fields can be bundled together flexibly in order to avoid artificial-sounding exaggeration in individual frequency fields.

## **Compressor**

The compressor is essentially an automated dynamic volume control tool. Pitch dynamics are limited, loud passages stay loud, and low passages become louder. Compression is often used to make the material more powerful, particularly for bass recordings and vocals, but also as master effects in the mixer for adding to the overall sound.

### **Ratio:**

Regulates the compression ratio.

### **Function:**

Defines the compressor's mode of operation depending upon the sound material.

## **Stereo FX**

The stereo FX processor provides adjustment of the alignment of the [audio](#) material in the stereo balance. If the stereo recordings sound weak and undifferentiated, an extension of the stereo base width can often provide better transparency.

### **Bandwidth control:**

Adjust the bandwidth between mono (on the extreme left), unchanged base width (center) and maximum bandwidth ("wide" on the extreme right).

Reducing the bandwidth can raise the overall level. In extreme cases, when the left and the right channels include identical material and the bandwidth control is pushed to the extreme left on "mono", the result can be a level increase of 3 decibels.

Raising the bandwidth (values of 100) diminishes the mono compatibility.

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## Audio effect dialogs

Some of the following effects can be opened individually (via the [context menu](#)), or as part of the track or master effects rack. However, the functionality remains the same.

## Reverb/Delay



The reverb effect device offers newly developed and very realistic reverb algorithms to add more room depth to your recording.

## Reverb

Reverb is probably the most important, but also the most difficult effect to generate.

## Fundamentals

Our everyday experience shows that not every room matches every instrument. Thus we have designed "virtual" rooms. However, it still remains important to find the correct parameters. Here are some examples of parameters that are decisive for the sound impression in real and virtual rooms:

- Size of room: The larger the room, the longer the sound travels between walls or objects. Our brain "calculates" the size from the time difference. The size impression is mainly determined from so-called first reflections and the discreet echo. We don't notice a (diffused) reverb.
- The reverberation time is mainly influenced by the composition of the walls, ceilings, and floors. This reverb time is highly frequency-dependent. For instance, the highs and mids are dampened more in rooms with curtains, carpets, furniture, and some corners than in an empty, tiled room.
- The density of the reflection. The sequence of the first reflection is particularly important. A room with many individually recognizable echoes feels alive, especially if they are quite far apart.
- The diffusion. Simple reverb machines do not take into account that reflections become more and more complex as they develop. They blur the first echoes at the beginning, which sounds artificial and "two-dimensional" for many signals. Our reverb effect works like a real room instead where individual echoes can still be heard at the beginning of the reverb but then reflect amongst each other more and more until they disappear in the signal sustain as a so-called "diffused hiss".

The presets include many rooms that were designed for certain instruments and applications and whose internal parameters have been optimized for these applications. However, you can influence most of the characteristics of the room using the provided sliders.

In addition to the rooms we have modeled two device types in the reverb effect that allow you to create an artificial reverb for a longer time: Plate Reverb and Spring Reverb.

## Plate reverb

A plate reverb consists of a large metal plate (often 0.5 to 1m<sup>2</sup> thick, or more) that is put into motion by a magnet and coil system (similar to a loudspeaker). On the reverb plate, so-called "taps" are positioned at different locations. These are pick-ups comparable to those on a guitar. Reverb plates have a very dense sound (high diffusion); no direct echo can be heard. They are therefore ideal for percussive metal. A plate reverb generates a smooth "pleasant effect" with vocals.

## Spring reverb

You probably remember spring reverb from guitar and keyboard amps, particularly the older ones. At the bottom of these amps, a unit consisting of two to four spirals is mounted on a vibration-free carriage. As with the reverb plate, it uses systems for transforming the electric signal into a mechanical one. There are different designs and sizes of spring reverb; however, they all have the same quite peculiar sound: the typical "bloing" sound when the springs are moved, similar to splashing. When the reverb dies away the basic pitch of the spring(s) can usually be heard quite clearly. Furthermore, the frequency range is considerably limited due to the losses in the spirals and in the used pick-up/transmitter. Despite this, the sound is special and some of the latest music styles (e.g. dub & reggae) would hardly be possible without spring reverb.

## Parameters

The reverb effect has the following parameters:

### Size:

Defines the size of the room (or the system for the plate and spring). With some low "size" settings, you

can also reduce the distance between the individual reflections. This allows resonance to develop (accentuated frequency ranges), which can sound oppressive if the reverb sustain is too long. The proper size for each instrument can be gauged by taking into account the interplay between the room and the resonance.

**Time:**

Reverberation time. This controller lets you define how far the echo will be absorbed, i.e. the time for the reverb to die away. Turning this knob to the left minimizes the time. You will then only hear the first reflection. Turning the knob to the right minimizes the absorption, and therefore results in a long sustained reverberation.

**Color:**

Within certain limits, you can influence the sound characteristic of the effect. The effect of this controller depends on the used preset. In rooms, "color" controls the dampening of the highs in the reverb (from dark to bright) as well as pre-filtering of the signal. The controllers for plate and spring presets also determine the dampening of the basses.

**Mix:**

This controller sets the mix ratio between the original and the edited signal. For rooms, you can quite easily move a signal further into the room by increasing the amount of effect. The last four presets are intended for use in an AUX channel of the mixer and are set to 100%.

## Presets

The presets are primarily sorted by instruments, but you can (and should) choose which preset you want to use for which instrument.

**Delay**

This effect is like an echo which delays the signal and repeats it.

**Delay**

: This sets the period of time between the individual echoes. The more the control is turned to the left, the faster the echoes will follow each other.

**Feedback**

: This adjusts the number of echoes. Turn the dial completely to the left, there is no echo at all; turn it completely to the right and there are seemingly endless repetitions.

**Mix:** This [fader](#)

determines how much of the unprocessed original sound (dry signal) is subjected to the echo (wet signal). Application of this effect in an AUX bus requires the controller to be set to 100% (all the way to the right).

## Timestretch and pitchshift



This effect device changes the object's speed and/or pitch.

### **Pitch:**

This control changes the pitch independent of the object's speed ('pitch-shifting').

### **Tempo:**

This control changes the tempo independent of the pitch ("time-stretching"). The object acts as if it were compressed or stretched on the track.

### **Tones/BPM:**

These fields are used to numerically enter the pitch or speed change. Only MAGIX Soundpool files are suitable for numerical entries as they contain information on pitch and speed.

**Setup:** This [button](#) opens a setup [dialog](#)

where you can select various pitchshifting and timestretching procedures.

- **Standard:** Timestretching and pitchshifting in standard quality. This method is suitable for [audio](#) material without a pronounced beat. Beat markers are evaluated to improve audio quality.
- **Smoothed:** Timestretching and pitchshifting for audio material without pulsing elements. The method is suitable for polyphonic orchestral instruments, pauses, speech, and singing. Beat markers are not evaluated.
- Here a considerably more complex algorithm is used which requires more processing time. The material can now also be used on very large factors (0.2...50) without bringing about strong artifacts. The material is "smoothed", which makes the sound softer and emits it at an adjusted phase level. This smoothing is hardly audible, for example, with speech, singing or solo instrumentation. Problems in the shape of distortions may arise with more complex spectra (sound mixes from various instruments or finished mixes).
- **Beat marker slicing:** Beat-synchronous timestretching and pitchshifting via splitting and temporal repositioning. Exactly set beat markers are required at the beats or transients. The markers can be generated in real time (automatically) or read from the [WAV](#) file if available (patched). In the Plus version's included MAGIX Music Editor, a patching tool is provided for users to set the markers themselves. The algorithm is suitable for rhythmic material that can be divided into individual beats or notes. This requires a low audio level before each beat or note.
- **Beat marker stretching:** Beat-synchronous timestretching and pitchshifting in standard quality. The material is stretched between beat markers positions so that the beats or attacks at the beat marker positions are not impaired by stretching. The markers can be generated in real time (automatically) or read from the source file if available (patched). This method is suitable for rhythmic material that can not be divided into individual beats or notes because the beats or notes overlap each other.
- **Beat marker stretching (smoothed):** Beat-synchronized timestretching and pitchshifting in high audio quality even with extreme time extension. Beat markers are used at the beats or transients. The markers can be generated in real time (automatically) or read from the WAV file if available (patched). This method is suitable for rhythmic material that can not be divided into individual beats or notes because the beats or notes overlap each other. This method requires a lot of processing time which is why it should be used sparingly on less powerful systems.
- **Universal HQ:** Universal methods for timestretching and pitchshifting in very high audio quality. Suitable for all types of audio material. Beat markers are evaluated to improve audio quality. This method requires so much processing time, that a realtime application is recommended only in exceptional situations. Using the apply function is recommended instead.

- **Monophonic voice:** Timestretching and pitchshifting for vocal solos, speech, or solo instruments. The material must not contain background noise, and excessive reverb may also be detrimental to the use of this method. With suitable material the audio quality is very high. In addition, the formants remain when pitchshifting.
- **Resampling:** Pitch shift and tempo cannot be changed individually. This method requires considerably little [CPU](#) time.

## **Audio effects in the mixer**

In this section:

[Equalizer](#)

[Compressor](#)



## Equalizer



The 10-band equalizer subdivides the frequency spectrum into ten areas ('bands') and equips them with separate volume controls. This way it is possible to create many impressive effects, from a simple boosting of the bass to complete elimination of a certain range of frequencies. Note: If low frequencies are boosted too much, the overall sound level is heavily increased which may lead to distortion. In this event, adjust the overall volume downward by using the 'master volume' control situated at the bottom center of the effect rack.

### [Slider control](#)

: Each of the ten frequency ranges can be separately boosted or turned down with the ten volume controls.

### **Link bands:** Using this [button](#)

randomly combines the frequency ranges with each other in to avoid artificial-sounding overemphasis of an individual frequency range.

### **Touch screen (right EQ section):** This is the 'sensor [field](#)

' of the EQ. Here you can draw any type of curve with the mouse. This will be immediately translated into a corresponding control setting on the left side of the EQ.

## Compressor



The compressor is an automated dynamic volume control. It limits overall dynamics, maintains the volume of loud passages so they stay loud, and increases the volume of low passages. A compressor can be put to good use for bass recordings and vocals, but also as a master effect in the mixer for subsequent editing of the overall sound.

Processing is carried out using a "look-ahead" method, similar to high-quality studio appliances. There are no peak overmodulations or other artifacts, as the algorithm can never be 'surprised' by sudden level peaks.

### Ratio:

This parameter controls the amount of compression.

### **Threshold:**

Set the volume threshold, below and above which compression is applied.

### **Attack:**

Sets the algorithm's reaction speed to increasing sound levels. Short attack times can create an undesirable "pumping" sound, as the volume is quickly reduced or increased correspondingly.

### **Release:**

Sets the algorithm's reaction speed to falling sound levels.

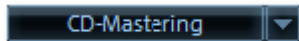
## MAGIX Mastering Suite

The MAGIX Mastering Suite is a special effects rack for use with the mixer master channel. Its effects provide [audio](#)

mastering functions to give the finished mixed music file a final polish.

### The On/Off switches

switch the effects on and off individually. Each effect has a range of presets that can all be picked from a list along the lower border of the effect.



The settings of all effects can also be saved together as one **preset**

so that you can use your ideal mastering setting again for other arrangements.



Each effect can be reset by pressing the

**"Reset"** [button](#). You can press the

**"Bypass"** [button](#)

to temporarily deactivate the effects.

In this section:

[Parametric Equalizer](#)

[MultiMax](#)

[Stereo FX](#)

[Digital Audio Meter](#)

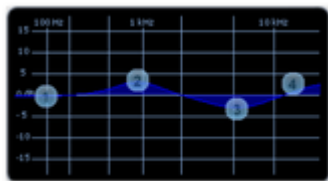
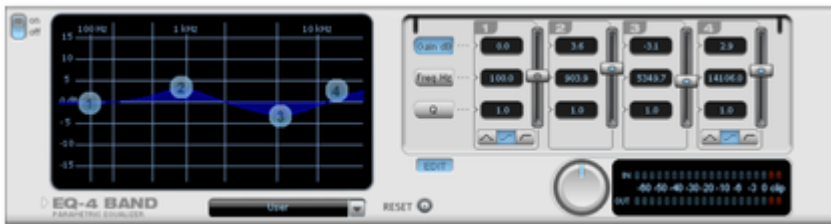
[Limiter](#)

**Note:** 5.1 Surround mode only provides the compressor and [parametric equalizer](#) devices in this case.

## Parametric Equalizer

The parametric equalizer consists of four filter bands for adjusting the overall sound of the music track. Each band is a filter with a typical "bell shape". Within a certain frequency range and around an adjustable middle frequency, you can increase or reduce the signal level gain. The width of this frequency range is called bandwidth. The bandwidth is defined by the Q value. The higher the Q value, the narrower and steeper the filter curve.

You can influence the basic sound of the mix by increasing and decreasing the broadband to give it more "depth" (lower center = 200-600 Hz) or more "air" (highs = 10Khz). You can also decrease the narrow bandwidth (high Q value) in the frequency response, e.g. to remove disruptive frequencies.



### Graphic:

The resulting frequency path of the equalizer is displayed in the graphic. The frequency is spread out horizontally, the increase or decrease of the respective frequency, vertically.

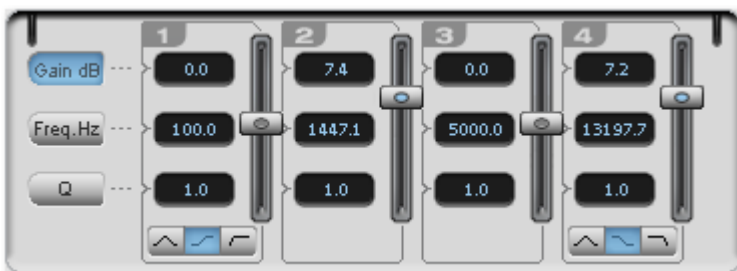
The blue bullets 1-4 symbolize the four [wave](#) bands. You can move them around with the mouse until you find your desired frequency response.



### Peak meter:

The peak meter gives you control over the output level of the equalizer. The adjacent master gain controller can be used to balance the level with the EQ.

**EDIT** **Edit:** The "Edit" [button](#) opens the fine tuning for the four bands:



### Parameter selection:

With the buttons on the right you can select the parameter that can be adjusted with four faders of each band. Furthermore, there are number keys to enter every parameter of the bands.




**Gain dB:** These controllers allow you to raise or lower the filter. Setting the controller to 0 deactivates the filter and doesn't use [CPU](#) power.

### Freq. Hz:

The center frequency of the individual filters can be set between 10 Hz and 24 kHz with the frequency controllers. Freely choosing the frequency enables multiple filters to be set to the same frequency in order to have a greater effect.

**Q (bandwidth):**

Set the bandwidth of the individual filters between 10 Hz and 10 kHz.

There is still a peculiarity among bands 1 and 4; The filter curve for these bands can be changed from a normal "peaking" EQ filter () to "shelving" () (this is the basic setting) and high (band 1) or high-cut (band 4) 

. When using the "shelving" filter, a soft increase or decrease in all frequencies happens above or below the filter frequency, and the Q parameter does not have a function here. With a low-cut or high-cut filter, all frequencies below (low-cut) or above (high-cut) the set frequency are filtered out.

## MultiMax



MultiMax is a compressor with three independent frequency bands. The dynamics are edited separately for each band.

The benefit of a multi-band compressor in comparison to a "normal" compressor is that the "pumping" tendency and other disturbing side effects are dramatically reduced when editing the dynamics. For instance, it can prevent a bass top peak from "reducing" the entire signal.

Multi-band technology also lets you specifically edit individual frequency ranges.

**Link bands:** When this function is activated and one [fader](#) is adjusted, all faders are changed in the same ratio. The type of dynamic editing is not influenced.

**High quality:** When the "high quality" setting is activated, an even more precise algorithm is used, but this requires more processing power. We recommend that you switch on this setting before you export the [project](#)

### Setting the frequency band

: The settings of the frequency bands are changed directly in the graphic. Simply click on the separator lines and move them.

### Bass/Mid/High

: These knobs control the level of compression for each frequency band.

### Presets

In MultiMax you can use the presets to open further special functions.

### Dynamic expander

: Compression that is too high will result in audible noise (usually defined as a pumping sound). Particularly radio recordings are recorded with very high compression rates to increase the perceived volume. Unfortunately compression reduces the dynamics (interval between the quietest and loudest part). The expander enhances the dynamics of the recording.

### Cassette NR-B decoder: [MAGIX Movie](#)

Edit Pro 16 simulates decoding of Dolby B + C noise suppression if no Dolby player is available. Cassettes recorded with Dolby B or C sound more muffled and slurry if played back without corresponding Dolby.

### Noise gate

: This cleaning function suppresses noise entirely below a certain noise level. This lets you create, for example, song transitions that are entirely noise-free.

**Leveler:** This setting automatically sets the entire material to an identical volume level. The volume control knob is no longer required. You can use this function to equalize greater volume differences within a song. To equalize volume variations between different songs you can also use the function "Normalize loudness" from the "Effects" [menu](#)

### DeEsser

: These special presets are for removing overstressed hiss sounds from speech recordings.

## Stereo FX



The Stereo FX enhancer allows you to determine the positioning of the [audio](#) material in the stereo picture. If the stereo recordings sound out of focus and undifferentiated, an extension of the stereo base width can often provide better transparency.

### **Bandwidth control:**

Adjusts the bandwidth between mono (on the extreme left), unchanged bandwidth (center), and maximum bandwidth ("wide", on the extreme right). Reducing the bandwidth can produce a rise in the level. In extreme cases, e.g. when the left and the right channels include identical material and the bandwidth control is pushed to the extreme left on "mono", the result can increase the level by 3 dB. Raising the bandwidth (values of 100) diminishes the mono compatibility. This means that recordings edited this way sound hollow when listened to in mono.

### **Volume control:**

Adjusts the volume of every single channel, thereby adjusting the entire balance. The reduction of left and right levels is displayed under the control buttons. A centered recording can later be moved to the left or right of the stereo balance.

### **Stereo meter:**

This provides a graphic display of the phase relation of the audio signal. You can use it to review the orientation of the signal in the stereo balance and the effect of the stereo enhancer. In order to achieve greatest compatibility with mono, the display should come closest to a diagonal line. Otherwise some frequency ranges may erase themselves if the stereo signal is played on a mono device.

### **Karaoke presets:**

These presets open a special karaoke effect that more or less eliminates vocals. It deletes middle frequencies typical for human vocals during playback so that someone else can do the singing. In typical karaoke songs, the lyrics are usually displayed as subtitles in the video clip so that the singer can follow along. [MAGIX Movie](#)

Edit Pro 16 also comes with a suitable feature: the title editor, which can be used to create karaoke subtitles. Please read the "Title editor" section in the chapter "Images and video objects".

## Digital Audio Meter



On the lower border of the MAGIX Mastering Suite there is a digital [audio](#) meter which provides separate control method displays for 10 [wave](#) bands on each channel. This device is used for orientation purposes, e.g. selective equalizer editing.

## Limiter



### **Limiter:**

MultiMax includes a limiter that prevents clipping by automatically lowering the level. Quiet parts remain untouched. Unlike the Compressor, it does not try to change the basic sound.



## Automatic track damping

This command automatically dampens the volume of other [audio](#) objects to add [movie](#) comments. You can also specify whether you want to dampen the original sound of the video, or all sound tracks.

In the [dialog](#)

, you can activate and deactivate the dampening value.

You can use this command while [recording audio](#)

(audio recording, advanced options).

# Animate objects

Different kinds of animations are provided in the Media Pool. The "Effects" tab under "Video effects", "Movement effects" and "[Audio effects](#) > General" provides you with the effects which can be animated using keyframes.

The following objects can be animated:

- Video objects
- [Image](#) objects (still images)
- Title objects
- MAGIX 3D Maker objects (3D texts)
- Visual objects
- Audio objects

In this chapter

[Preparing animations](#)

[Place keyframe](#)

[Copy keyframe](#)

[Display keyframes of individual parameters](#)

[Retroactively editing an effect's keyframes](#)

[Soft movement](#)

[Delete keyframe](#)

[Editing an effects curve in the object](#)

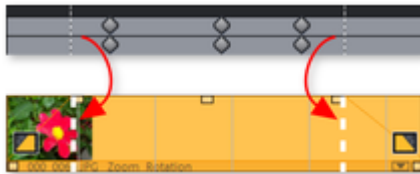
[Effects curves - Additional functions](#)

# Preparing animations

- First, select the object in the Arranger to animate.
- For complex animations, we recommend placing a marker beforehand for orientation.
- In the Media Pool, open the "Effects" tab and click on the effect you would like to animate under "Video effects" or "Movement effects".

**Note:** For [audio](#) effects, activate the effect to be animated in the audio object's [context menu](#)

- If necessary, set up the effect however you would like it for the start of the animation.
- There is a timeline in the lower section of the Media Pool. You can see here which animated effects are applied to the selected object. Keyframes may be placed, selected, moved, and deleted.



There are two stippled lines in the timeline to help you orientate yourself while you edit movement. These lines will help you recognize the start or end of the transition.

## Place keyframe

Click the timeline to set the playback marker at the locations where a keyframe should be added.

### Note

: You can also use the timeline in the arranger for exact positioning. If you are using markers for orientation, then this is the easier choice.



The [button](#)

places keyframes for all parameters required in the animation.

Additional keyframes can be added simply by placing the playback marker at the next keyframe location and changing the parameters

The positioned keyframes can also be retroactively moved via drag & drop.

## Copy keyframe



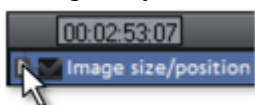
Select the keyframes to be copied by clicking them and then press the "Copy" [button](#)



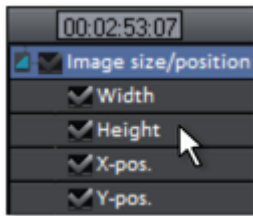
Next, set the playback marker at the location for insertion and the press the "Insert" [button](#)

## Display keyframes of individual parameters

Multiple keyframes are added simultaneously to effects if they include multiple parameters.



Click the small arrow beside the name of the animated effect to display all of its parameters.



Now all keyframes of the effects parameter can be individually moved, deleted, activated, and deactivated.

### Note

: Only those parameters are listed which are used for the animation. As soon as another parameter is required for editing the effect, it becomes visible to you here.

## Retroactively editing an effect's keyframes

Previously set keyframes can be retroactively and temporally moved and their values edited. Keyframes can be moved via drag & drop. Simply click on the keyframe and drag it to the desired position.

To change an effect's setting for an already positioned keyframe, click the keyframe and adjust the effect in the Media Pool.

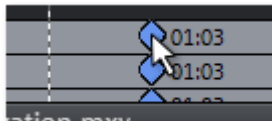
## Soft movement



Normally, a hard, unnatural pan results after points are set.

This option makes sure that the progression of these movements is executed softer and more naturally. However, you should note that it can happen that a pan slightly exceeds the [frame](#) border.

## Delete keyframe



Select the keyframe to be deleted by clicking it.

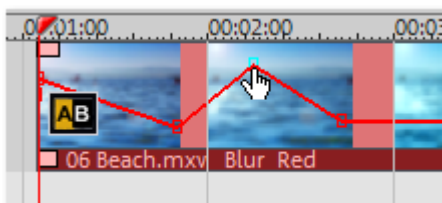


This [button](#) removes the selected keyframe.

## Editing an effects curve in the object



**Activate effects curve:** For each animated effects parameter, a curve is created and placed over the object. Click this [button](#) to display the effects curve on the object.



The curve can either be edited with the individual curve points (in "Standard" mouse mode) or by freely drawing the effect curve (in "Curve" mouse mode).

New curve points can be added to the curve in "Standard" mode via "Ctrl + Shift" and clicking; existing ones can be deleted in the same way. Every curve point can be moved with the mouse horizontally and vertically.

**Note**

: The buttons for activating effects curves are first displayed once the first keyframe has been placed.

## Effects curves - Additional functions



The [context menu](#)

can also be opened via the small arrow beside the effects indicator.

**Delete effects**

: Removes the selected effect completely.

**Delete effects curve**

: Removes the effects curve to be created again.

**Copy effects curve:** The effects curve is copied to the [clipboard](#) to be used at other positions.

**Insert effects curve**

: A previously copied effects curve can be inserted elsewhere with this function at any time. This may be in the same object or in another object.

**Note:** If you would like to insert the curve into a longer or shorter object, then think about setting the option "Connect curve length with object length" correctly **before copying**

**Connect curve length with object length:** If this option is set, then changes to object length will affect the effects curve accordingly.

In practice, this behavior is needed rarely, for example if objects are stretched or compressed. The option is deactivated by default for this reason.

**Load effects curve:** A previously saved effects curve may be loaded via this [menu](#) item. This is useful, for example, if you have added your own default animations.

**Caution!**

The current effects curve will be overwritten as another one is loaded.

**Save effects curves**

: Effects curves can be saved as a separate file. This is useful, for example, if you want to add your own default animations and simply load them again at other positions again.

**Tip**

: Be aware that during saving the setting "Connect curve length with object length" is saved as well and applied during loading.

## Place keyframe

Click the timeline to set the playback marker at the locations where a keyframe should be added.

### Note

: You can also use the timeline in the arranger for exact positioning. If you are using markers for orientation, then this is the easier choice.

- ◆ The [button](#) places keyframes for all parameters required in the animation.

Additional keyframes can be added simply by placing the playback marker at the next keyframe location and changing the parameters

The positioned keyframes can also be retroactively moved via drag & drop.

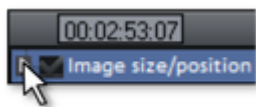
## Copy keyframe

- ◆ Select the keyframes to be copied by clicking them and then press the "Copy" [button](#)

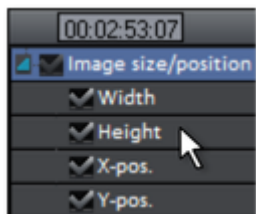
- ◆ Next, set the playback marker at the location for insertion and the press the "Insert" [button](#)

## Display keyframes of individual parameters

Multiple keyframes are added simultaneously to effects if they include multiple parameters.



Click the small arrow beside the name of the animated effect to display all of its parameters.



Now all keyframes of the effects parameter can be individually moved, deleted, activated, and deactivated.

### Note

: Only those parameters are listed which are used for the animation. As soon as another parameter is required for editing the effect, it becomes visible to you here.

## Retroactively editing an effect's keyframes

Previously set keyframes can be retroactively and temporally moved and their values edited.

Keyframes can be moved via drag & drop. Simply click on the keyframe and drag it to the desired position.

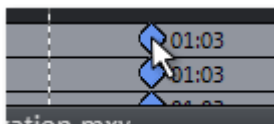
To change an effect's setting for an already positioned keyframe, click the keyframe and adjust the effect in the Media Pool.

## Soft movement

- ◆ Normally, a hard, unnatural pan results after points are set.

This option makes sure that the progression of these movements is executed softer and more naturally. However, you should note that it can happen that a pan slightly exceeds the [frame](#) border.

## Delete keyframe



Select the keyframe to be deleted by clicking it.

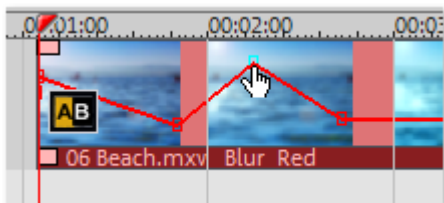


This [button](#) removes the selected keyframe.

## Editing an effects curve in the object



**Activate effects curve:** For each animated effects parameter, a curve is created and placed over the object. Click this [button](#) to display the effects curve on the object.



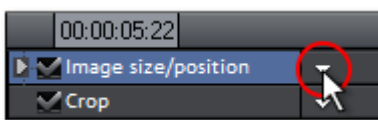
The curve can either be edited with the individual curve points (in "Standard" mouse mode) or by freely drawing the effect curve (in "Curve" mouse mode).

New curve points can be added to the curve in "Standard" mode via "Ctrl + Shift" and clicking; existing ones can be deleted in the same way. Every curve point can be moved with the mouse horizontally and vertically.

### Note

: The buttons for activating effects curves are first displayed once the first keyframe has been placed.

## Effects curves - Additional functions



The [context menu](#) can also be opened via the small arrow beside the effects indicator.

### Delete effects

: Removes the selected effect completely.

### Delete effects curve

: Removes the effects curve to be created again.

**Copy effects curve:** The effects curve is copied to the [clipboard](#) to be used at other positions.

### Insert effects curve

: A previously copied effects curve can be inserted elsewhere with this function at any time. This may be

in the same object or in another object.

**Note:** If you would like to insert the curve into a longer or shorter object, then think about setting the option "Connect curve length with object length" correctly **before copying**

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: Effects curves can be saved as a separate file. This is useful, for example, if you want to add your own default animations and simply load them again at other positions again.

**Tip**

: Be aware that during saving the setting "Connect curve length with object length" is saved as well and applied during loading.

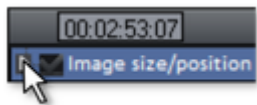


## Copy keyframe

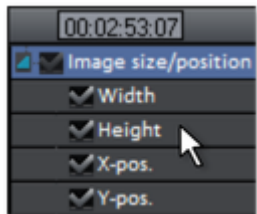
- ◆ Select the keyframes to be copied by clicking them and then press the "Copy" [button](#)
- ◆ Next, set the playback marker at the location for insertion and the press the "Insert" [button](#)

## Display keyframes of individual parameters

Multiple keyframes are added simultaneously to effects if they include multiple parameters.



Click the small arrow beside the name of the animated effect to display all of its parameters.



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: Only those parameters are listed which are used for the animation. As soon as another parameter is required for editing the effect, it becomes visible to you here.

## Retroactively editing an effect's keyframes

Previously set keyframes can be retroactively and temporally moved and their values edited.

Keyframes can be moved via drag & drop. Simply click on the keyframe and drag it to the desired position.

To change an effect's setting for an already positioned keyframe, click the keyframe and adjust the effect in the Media Pool.

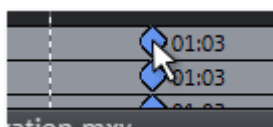
## Soft movement

- ◆◆ Normally, a hard, unnatural pan results after points are set.

This option makes sure that the progression of these movements is executed softer and more naturally.

However, you should note that it can happen that a pan slightly exceeds the [frame](#) border.

## Delete keyframe



Select the keyframe to be deleted by clicking it.

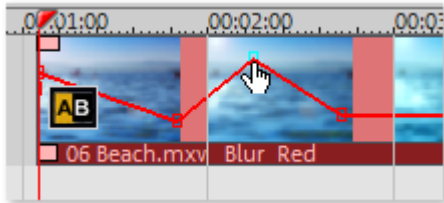


This [button](#) removes the selected keyframe.

# Editing an effects curve in the object



**Activate effects curve:** For each animated effects parameter, a curve is created and placed over the object. Click this [button](#) to display the effects curve on the object.



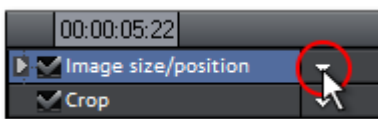
The curve can either be edited with the individual curve points (in "Standard" mouse mode) or by freely drawing the effect curve (in "Curve" mouse mode).

New curve points can be added to the curve in "Standard" mode via "Ctrl + Shift" and clicking; existing ones can be deleted in the same way. Every curve point can be moved with the mouse horizontally and vertically.

## Note

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# Effects curves - Additional functions



The [context menu](#) can also be opened via the small arrow beside the effects indicator.

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**Load effects curve:** A previously saved effects curve may be loaded via this [menu](#) item. This is useful, for example, if you have added your own default animations.

## Caution!

The current effects curve will be overwritten as another one is loaded.

## Save effects curves

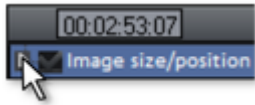
: Effects curves can be saved as a separate file. This is useful, for example, if you want to add your own default animations and simply load them again at other positions again.

**Tip**

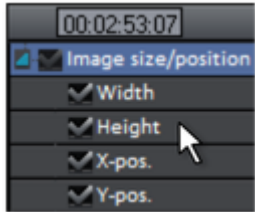
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Keyframes can be moved via drag & drop. Simply click on the keyframe and drag it to the desired position.

To change an effect's setting for an already positioned keyframe, click the keyframe and adjust the effect in the Media Pool.

# Soft movement

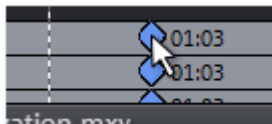


Normally, a hard, unnatural pan results after points are set.

This option makes sure that the progression of these movements is executed softer and more naturally.

However, you should note that it can happen that a pan slightly exceeds the [frame](#) border.

# Delete keyframe



Select the keyframe to be deleted by clicking it.

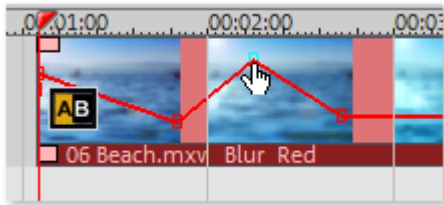


This [button](#) removes the selected keyframe.

# Editing an effects curve in the object



**Activate effects curve:** For each animated effects parameter, a curve is created and placed over the object. Click this [button](#) to display the effects curve on the object.



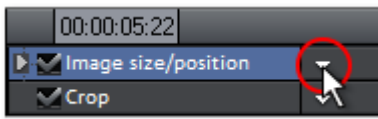
The curve can either be edited with the individual curve points (in "Standard" mouse mode) or by freely drawing the effect curve (in "Curve" mouse mode).

New curve points can be added to the curve in "Standard" mode via "Ctrl + Shift" and clicking; existing ones can be deleted in the same way. Every curve point can be moved with the mouse horizontally and vertically.

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## Effects curves - Additional functions



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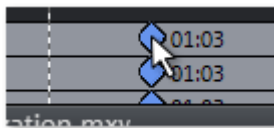
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This option makes sure that the progression of these movements is executed softer and more naturally. However, you should note that it can happen that a pan slightly exceeds the [frame](#) border.

## Delete keyframe



Select the keyframe to be deleted by clicking it.

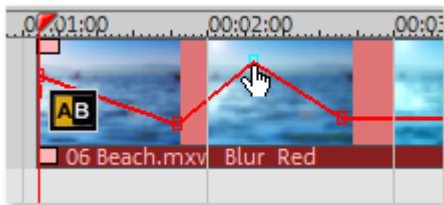


This [button](#) removes the selected keyframe.

## Editing an effects curve in the object



**Activate effects curve:** For each animated effects parameter, a curve is created and placed over the object. Click this [button](#) to display the effects curve on the object.



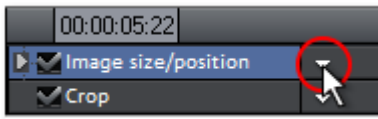
The curve can either be edited with the individual curve points (in "Standard" mouse mode) or by freely drawing the effect curve (in "Curve" mouse mode).

New curve points can be added to the curve in "Standard" mode via "Ctrl + Shift" and clicking; existing ones can be deleted in the same way. Every curve point can be moved with the mouse horizontally and vertically.

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: The buttons for activating effects curves are first displayed once the first keyframe has been placed.

## Effects curves - Additional functions



The [context menu](#)

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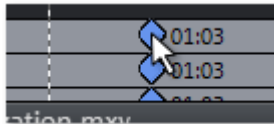
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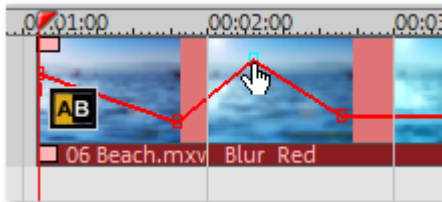


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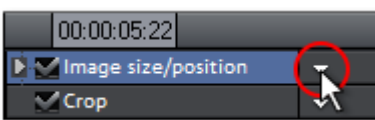
The curve can either be edited with the individual curve points (in "Standard" mouse mode) or by freely drawing the effect curve (in "Curve" mouse mode).

New curve points can be added to the curve in "Standard" mode via "Ctrl + Shift" and clicking; existing ones can be deleted in the same way. Every curve point can be moved with the mouse horizontally and vertically.

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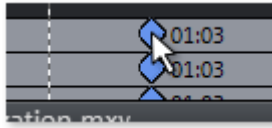
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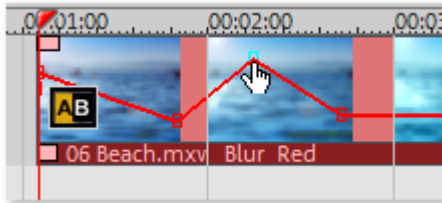


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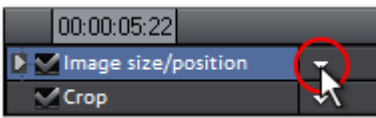
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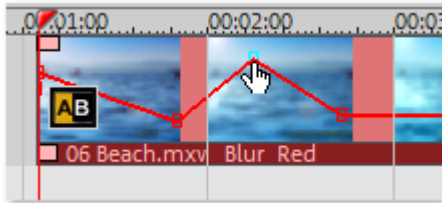
**Tip**

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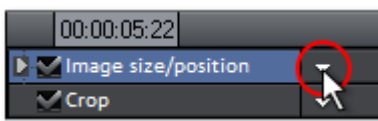
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: Removes the effects curve to be created again.

**Copy effects curve:** The effects curve is copied to the [clipboard](#) to be used at other positions.

## Insert effects curve

: A previously copied effects curve can be inserted elsewhere with this function at any time. This may be in the same object or in another object.

**Note:** If you would like to insert the curve into a longer or shorter object, then think about setting the option "Connect curve length with object length" correctly **before copying**

**Connect curve length with object length:** If this option is set, then changes to object length will affect the effects curve accordingly.

In practice, this behavior is needed rarely, for example if objects are stretched or compressed. The option is deactivated by default for this reason.

**Load effects curve:** A previously saved effects curve may be loaded via this [menu](#) item. This is useful, for example, if you have added your own default animations.

## Caution!

The current effects curve will be overwritten as another one is loaded.

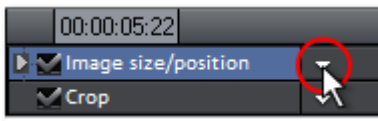
## Save effects curves

: Effects curves can be saved as a separate file. This is useful, for example, if you want to add your own default animations and simply load them again at other positions again.

**Tip**

: Be aware that during saving the setting "Connect curve length with object length" is saved as well and applied during loading.

# Effects curves - Additional functions



The [context menu](#)

can also be opened via the small arrow beside the effects indicator.

## Delete effects

: Removes the selected effect completely.

## Delete effects curve

: Removes the effects curve to be created again.

**Copy effects curve:** The effects curve is copied to the [clipboard](#) to be used at other positions.

## Insert effects curve

: A previously copied effects curve can be inserted elsewhere with this function at any time. This may be in the same object or in another object.

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## Tip

: Be aware that during saving the setting "Connect curve length with object length" is saved as well and applied during loading.

# Add sound

In principle, any track in MAGIX [Movie](#)

Edit Pro 16 can be used as a sound track. There are no specific track types. But it is easier not to mix object types within one track.

In this chapter

[Load and edit audio files](#)

[Import audio CD](#)

[MAGIX Soundtrack Maker](#)

[Tempo and beat recognition \(Plus version\)](#)

[Adding a sound track using MIDI songs](#)

[Synthesizer](#)

[Mixer](#)

[Audio effects](#)

[5.1 Surround](#)

[Scrubbing](#)

[Mix down of audio objects](#)

# Load and edit audio files

All importable [audio](#)

files can be accessed from the Media Pool and previewed (as sound) by a click on the file name. All files can be dragged into the arranger window.

Tracks from audio CDs can be also placed into the arrangement via drag & drop.

Edits, fine positioning, volume adjustment, fading in and out, are all processed using the object tab directly in the arranger.

Various effect curves may be selected for audio tracks, dynamically controlling selectable effects, volume or stereo panorama. More information about this can be found in the chapter "Animate objects", section "Effect curves for the audio track".



# Import audio CD

The steps are similar to transferring [wave](#) files into an arrangement:

- Insert an [audio](#) CD into the CD/DVD drive of the PC.
- Go to your CD/DVD drive in the Media Pool. The individual CD titles appear in the file list.
- A single mouse click starts the playback of the CD title for prelistening.
- Drag & drop the CD title into a track in the current arrangement and the song will be grabbed and copied to the hard drive. The files will be saved in the "Import" directory ("Program settings -> [Folders](#)")
- The audio object appears in the track and can be played back or edited immediately.

A special program is used for digitally importing the audio data from the CD/DVD drive. Some drives do not support this mode (an error message will be displayed) or support will only be of low quality (the audio objects will contain crackling).

If this method does not yield a satisfactory result, you can open the CD manager via the [menu](#) command "File -> Read tracks from audio CD". This option opens the CD manager where you can select tracks from audio CDs and import them into the arrangement. You can also select the drive if you have more than one and adjust the import settings.

If this is also unsuccessful, you can also play the CDs using the drive and record them with the sound card. More can be found in the "[Recording audio CDs](#)" section.

## CD Manager

This option opens the CD Manager where you can select tracks from [audio](#) CDs and import them into the arrangement. You can also select and configure the CD-R if you have more than one drive.

The CD Manager lets you import audio data using most CD and DVD drives. You may have to contact your technical support to find out which drive is suitable. Data is imported digitally. Audio tracks are imported into the arrangement as [WAV](#) files and saved in the Import directory. (Program settings -> [Folders](#) ).

To import audio tracks you should proceed as follows:

- Select the desired CD-R drive if you have installed more than one drive.
- Click on the "Track list" [button](#).
- Select the desired title from the track list (using the key combination Shift or Alt and the cursor keys).
- Click on "Copy selected track(s)."
- The audio material is now copied from the CD drive onto [hard disk](#). The progress is displayed.
- Close the track and drive lists. In your arrangement there are now one or several new objects that contain [audio](#) material of the disc.

## Drive list dialog

**Tracklist:** This [button](#) opens the track list [dialog](#) for copying one or multiple tracks.

**Configuration:** This [button](#)

opens the configuration dialog where you can make various special settings, SCSI IDs, etc.

**Reset:**

Restores the default settings of the drive.

**Add drive:**

Creates a new drive entry in the list, which you may wish to adjust.

**Delete drive:**

Deletes a selected drive from the list.

**Save setup:**

Saves the current drive list and all configuration data in a \*.cfg file.

**Load setup:**

Loads the current drive list and all configuration data from a \*.cfg file.

## The tracklist dialog

**Copy selected track(s):** This [button](#) starts [audio](#) copy. A new object is created for every track in the arrangement and the corresponding track marker is created.

**Play:**

Starts the audio playback of the first selected track on the list (for testing).

**Stop:**

Stops playback.

**Pause:** Stops playback so as to start it later from the same position using the "Resume" [button](#)

**Resume:**

Resumes playback if it had been paused before.

**Select all tracks:**

All audio tracks are selected, for instance, to copy the entire CD. Track markers can also be made using Shift or Alt pressed together with the arrow keys. Multiple tracks can be selected by pressing "Ctrl + mouse click".

**Deselect all tracks:**

All markers are reset.

## **The CD-ROM configuration dialog**

### **Drive name:**

Lets you edit the name of the drive in the list. This is useful if you create more than one entry accessing the same physical drive.

### **Host adapter number:**

Lets you specify the number of your SCSI adapter - normally "0".

### **SCSI-ID:**

Lets you set the ID of your CD-ROM drive. Be sure to set the correct ID; there is no error checking!

### **SCSI-LUN:**

Select the SCSI-LUN parameter, normally "0".

### **Alias:**

Lets you select the manufacturer type of your CD-ROM drive.

**Normal copy mode:** Copies the [audio](#) data without any [software](#) correction.

### **Sector synchronization copy mode:**

Copies the audio data using a correction algorithm. This is especially useful, since many CD drives have problems finding an exact position again and gaps can occur.

### **Burst copy mode:**

Optimizes the speed of the copy process; no software corrections made.

### **Sectors per cycle:**

Defines the number of audio sectors that should be read from the audio CD in a read cycle. The higher the number of sectors, the faster the copying process. Many SCSI systems have problems with more than 27 sectors.

### **Sync sectors:**

Sets the number of audio sectors that will be used for software correction. A higher number results in a better synchronization but also in a slower copying process.

## Scanning CD tracks with the recording dialog

Some CD-ROM drives do not support this mode (trying digital extraction results in an error message), or they only support it with difficulty (results in [audio](#) objects with crackling noise, skips, etc.). In this case, the CD may be "scanned" by recording it into the computer. When recording the CD to the computer, the CD titles are simply played back from the CD-ROM drive and are re-recorded as [.WAV](#) by the sound card. Before recording a CD to your computer, change the program settings in the "File -> Audio/Video options" [menu](#). To ensure easy recording of the CD titles via the "Recording" [dialog](#), the audio output on the CD-ROM drive must also be connected with the sound card input. This connection is usually already set up on modern multimedia PCs. If not, this is easily done by installing a cable inside the computer case.

# MAGIX Soundtrack Maker

The MAGIX Soundtrack Maker adds atmosphere. Music tracks corresponding to the specified mood are generated automatically. Even mood changes are possible.

Open the MAGIX Soundtrack Maker using the [Edit > Assistants menu](#)

. The work is split into 3 steps.

Then close the [dialog](#)

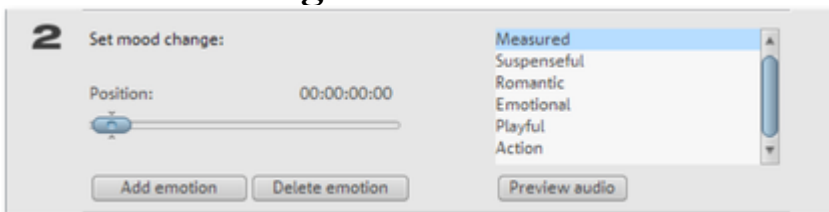
by clicking on "Apply". If you click on "Cancel", the dialog will be closed and all changes will be discarded.

## Select music style



First, choose the musical style you want. The option "Apply only between start and end marker" lets you limit the length of the background music you want to create. You can also set the start and end markers with the left and right mouse [button](#) while MAGIX Soundtrack Maker is open.

## Set mood change



You can also select a mood from the list.

### Preview:

Here you can preview your selected emotion.

**Position:** With the position [slider](#) you can go to a certain position to set the emotions at a certain position. Instead, you can also move the start marker with the left mouse [button](#). The preview will be displayed in the video monitor.

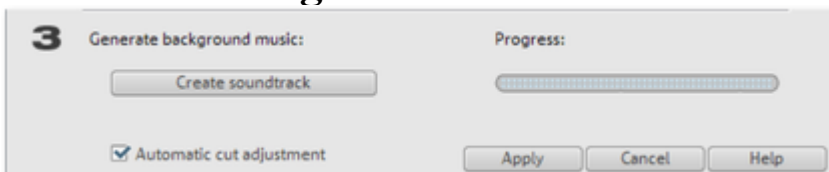
**Insert emotion:** This [button](#)

inserts the emotion at the current position. MAGIX Soundtrack Maker will then suggest a new position for the next emotion by adjusting the position slider. Of course, you can also position it elsewhere and insert additional moods.

**Delete emotion:**

Deletes the current emotion.

## Generate background music



One click on "Create soundtrack" creates a new soundtrack.

"Progress" shows the current status.

### Variations

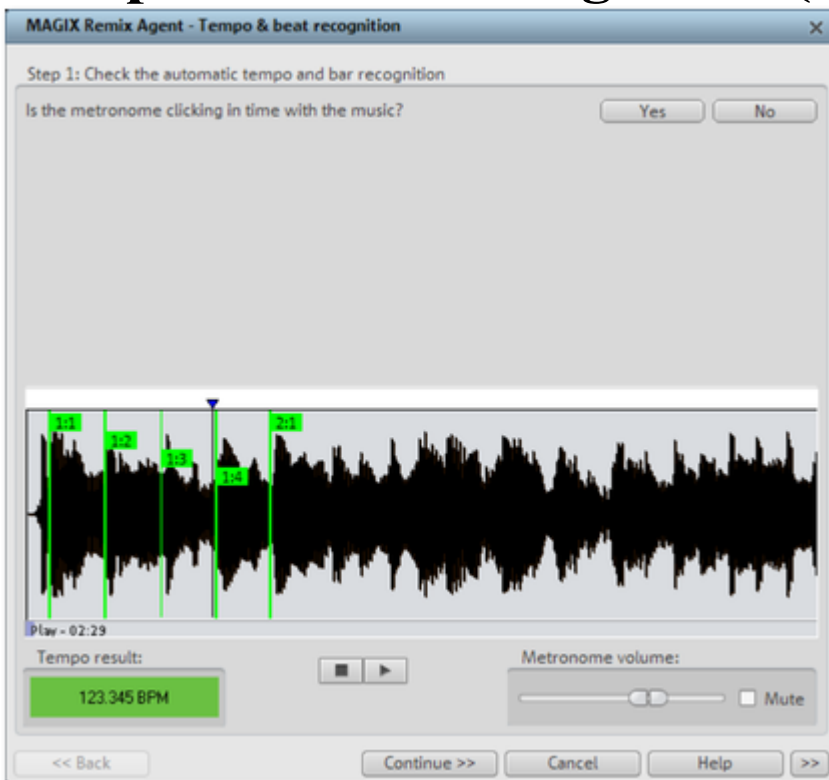
If you don't like the background music created, you can create variations.

You can do this for the entire background music as well as for individual emotions:

- If you want to vary the entire background music, simply click on "Create variations".
- If you only want this to apply to a certain emotion, you should first go to it with the position [slider](#) in the [dialog](#) (or the start marker on the main screen). Then activate the option "Vary only selected emotions". Now click "Create variations".



# Tempo and beat recognition (Plus version)



The Tempo and beat recognition in MAGIX [Movie](#)

Edit Pro 16 is a special tool for video clips. It analyzes the rhythm of a musical piece. The basis for this analysis is the rhythm speed, measured in BPM (Beats Per Minute).

After determining the BPM value of the song, the song will be subdivided into short passages of equal length. The individual objects having the duration of exactly one bar at first stay grouped, so as not to accidentally "rearrange" the song. (Of course, if you like you can do just that! To do so click on "ungroup").

When editing only the resulting object edges are important. Because all objects can always latch to each other on their edges, videos can be arranged to transition exactly to the beat of the music: The points along the track where videos lock together lie exactly on the bars of the music.

## **Prerequisites for using the beat recognition assistant**

- Songs must be longer than 15 seconds
- Songs must be "rhythmic" (i.e. they can be danced to)
- Songs must be in stereo format

## **Preparation - Setting the start marker and object end**

Before opening the Auto Remix Assistant, you should set the start marker at the position in the song object in the arranger where you want detection to start. If the song contains a long [intro](#) without beats, set the start marker after the intro. As a rule of thumb, the Auto Remix Assistant should always be "fed" dance music.

- The start marker should be set before a quarter note beat or, better still, briefly before a beat at the start of a bar.
- If the start marker lies before the song object, the object is examined from the beginning.
- If detection is not performed by the end of the song, the object can be shortened accordingly with the object handle at the end of the object.

## Automatic Tempo Recognition

When the Auto Remix Assistant is launched, the selected song object is analyzed and played back. A metronome begins to click according to the result and lines visualize the positions of the quarter notes found in the [wave](#)-shaped display.

The following cases are differentiated:

- Position of the start of a measure (the one): red line.
- Position of the other quarter notes (the two, three, and four): green lines.
- Reliably recognized positions: thick lines.
- Unreliably recognized positions: thin lines.
- When tapped, blue lines appear.

If the tact and tempo information is already present, points are indicated above the display at the appropriate positions. The metronome volume can be regulated below and to the left of the wave-shaped display. To the right, the BPM value is indicated. If a valid BPM value was found, it is displayed in green.

If the metronome clicks in time with the music, the measure start is correct. If not, you can correct the tempo manually.

## Setting the manual and Onbeat/Offbeat

If the result is incorrect, you can help the Auto Remix Assistant with a few mouse clicks on the correction buttons.

There are two possibilities:

On the one hand, the "Tempo correction" list offers alternative BPM numbers which could also fit with the music. The adjustable BPM values are detected automatically ? the total BPM can therefore deviate from song to song.

For more difficult [audio](#) material, we recommend using the "Tapping input" mode. Either the "T" key must be pressed or the "Tap tempo" [button](#) must be clicked with the mouse in time with the music. With repeated tapping of the tempo correction [button](#)

, one should keep an eye on the color in the BPM display. In the "unlocked" condition (red), the tapping is not in time with the music. One should tap until the "locked" condition is displayed. After a short time, you will hear if the result is correct via the metronome.

Subsequently, offbeat correction takes place as required. If the detected quarter note beats lie around the length of an eighth note (transferred behind the real positions of the quarter note beats), one or more alternatives can be selected from the onbeat/offbeat correction list.

## Determining the start of a measure

Next, the starting point of the measure is corrected. The beat at the start of the measure must always agree with the high tone of the metronome and/or the red line in the [wave](#)-shaped display.

Corrections can be made by tapping; If the start of the measure can be heard, tap with the mouse or press the "T" key. Alternatively, you can also select how many quarter notes the "one" is to be pushed to back.

If the starting marker was set briefly before the first beat of a measure, this correction is not necessary.

**Note:** With all corrections, the metronome and visualization react to the lines in the [wave](#)-shaped display only after a short delay.

## Using BPM and beat detection

Now you may select one of the actions to be adapted to the arrangement song (or vice versa) or cut up the songs at the ends of a measure.

## Save only Tempo & Beat information

Only [wave file](#)

data is stored. This makes sense if some manual post-correction is required for determining beat/tempo. When the data is stored, tempo & beat regulation can be released for future tempo adjustments or to create object remixes.

## Tempo adjustment

### Setting the object tempo to the arrangement tempo

This fits the object length to the existing arrangement. Three different procedures are possible: timestretching, resampling, or [audio](#) quantization.

- Timestretching keeps the pitch of the song constant, but sometimes the sound quality can suffer.
- Resampling changes the pitch (similar to changing the speed of a record player), and retains the sound quality of the song as much as is possible.
- During audio quantization, the audio file takes the tempo adjustments into consideration as if the first remix object (see below) were created and combined immediately into a new audio file. If the recognition is uncertain, extreme tempo fluctuation may result. It is particularly important to set the starting marker so that the tempo is recognized definitely. The advantage of audio quantization is that small tempo fluctuations in the music balance out. The start of the measure always agrees with the start of the arrangement measure and never plays out of time.

### Setting the arrangement tempo to the object tempo

The arrangement adopts the detected BPM value. If you would like to use the cut-up song as the basis for a new composition (e.g. for remixes), then this option should be active.

## Creating remix objects

The song is cut by beat into individual objects. Some applications may include:

- To produce loops from complete songs which can then be used with other material. Most importantly, not all remix objects are suitable as loops. Ideally, less complex material should be used, e.g. drums from an [intro](#).
- To remix songs, thus changing the sequence of the objects, cutting or doubling beats or to enrich the song with other loops or synth objects.
- To mix two songs: If percussion and tempo fit perfectly, can you blend the songs without "side effects"?

This option can be activated later from the "Object" [menu](#), provided that the tempo data is stored.

### The "Audio quantization" option:

Audio quantization fits new objects exactly in time with the arrangement.

With homemade music, tempo fluctuations are common, and therefore different measure lengths may result. Nevertheless, so that the objects fit into the rigid timing pattern of the VIPs, the time processor is activated automatically and object timestretching is used to correct the different lengths.

### Setting resampling for small corrections:

If the necessary corrections are very small, better quality resampling can be used instead of

timestretching. Afterwards, you should not change the master tempo any longer, since definite pitch changes may arise.

**Remix objects in "Loop" mode:**

New objects are set in "Loop" mode. When extending the object with the right object mouse handle, the original length of the object is played again and again.

**Setting the arrangement tempo to the object tempo:**

(see above)

**Note**

: Time correction assigned to objects can be subsequently cancelled if the time processor is called up and edited ("Timestretch/Resample object", or double click on the object to open the FX racks associated with the time processor).

**Cancel:** The [dialog](#) is closed.



# Adding a sound track using MIDI songs

A few words about [MIDI](#): MIDI files do not contain the actual sounds like [wave](#) files, only the note control information. This data is interpreted to effect playback by the synthesizer chip on the sound card. This has several advantages:

- MIDI files need a lot less memory than wave files, so more MIDI files will fit on a CD-ROM.
- MIDI files can be adapted to any beat (BPM) without affecting the sound; only the playback tempo needs to be changed.
- MIDI files are very easy to transpose to another pitch; a section in a song does not have to be saved in several different keys. The version in C major is sufficient, and it can then be transposed to any key by simply clicking with the right mouse [button](#).

The disadvantage of MIDI files: The sound is not true [audio](#). The audio is only produced when the synthesizer chip on the sound card plays it back. As a result, high-quality sound cards or external synthesizers will sound completely different and better than standard sound cards, depending upon the settings for playback "voices". Therefore, it is definitely worth using a good sound card or external MIDI synthesizer with MAGIX [Movie](#)

Edit Pro 16!

## Arranging MIDI files

Integrating MIDI files in an arrangement:

Search for a directory containing MIDI files using the Media Pool located at the left edge of the screen. Click on a file, and it will be played back immediately. Now drag the desired file into the arrangement to finish the process.

An object will appear which displays the MIDI notes as dots. The high notes are dots in the upper section, and the lower notes are the dots further down in the lower section. You can even see the velocity of the notes. The louder the note is played, the brighter it appears on the screen.

MIDI objects may be arranged, the volume may be modified (middle handle) or fades (in or out) may be added (top right and left [handles](#)) in the same way as audio, video, or synthesizer objects. The "element bar" lets you "open" an entire track instantly from a MIDI loop. If a MIDI file seems to be empty, check the MIDI replay device in the "Playback parameters" window ("P" key or [menu](#) "File -> Settings -> Playback parameters"). Your sound card driver or your MIDI interface must be set correctly to hear MIDI!

## MIDI interface and external sound generator

Of course, MIDI objects can also be played back over a MIDI interface into external synthesizers, sound modules, etc. Start by setting FX to 1.0. The timing between MIDI and audio can be balanced later if you notice a delay between the two. This is important for very slow arrangements, since the sample rate on the sound card is not entirely. The MIDI drivers can be set in the "Playback parameters" window ("P" key or menu "File -> Settings -> Playback parameters").

## Convert MIDI files to audio files

Before exporting (as a video, for example) an arrangement, all MIDI objects must be converted into audio objects first, since these contain only pure control information for the sound reproduction before they are exported.

First, connect the MIDI synthesizer (usually the sound card) output to the sound card input. Now the MIDI file can be played back and simultaneously recorded as an audio file using the record function. The result is an [audio](#) file that can be processed and exported together with other multimedia files.

# Synthesizer

## Creating synth objects

The [software](#) synthesizer is to be found in a special file that is configured onto the [hard disk](#) during installation. To open it, press the Synth-[Button](#) in the MediaPool File manager.

The symbols for all the available synthesizer Plug-Ins are now displayed in the file list.

Any [plug-in](#) can be pulled into the arrangement by means of drag & drop. A synth object appears on the relevant track and the operating console of the [plug-in](#) is opened. Synth objects are programmed with the help of the operating console.

## Programming the synth object

Depending on the [plug-in](#)

, various functions to create and control sound can be applied via the operating console.

To monitor programming, playback can be started and stopped at any time with the space bar while the operating console is open.

## Arranging the synth object

Once you have finished programming the melodies or rhythms of the synth object, you can close the operating console and arrange the synth objects on the tracks. They can be stretched or compressed, faded in and out, turned down or up, etc. with the help of [handles](#)

: These steps are the same for all objects.

The operating console of every synth object can be reopened at a later stage by double clicking or via the synth [button](#) if you would like to reprogram the object. In addition, you can drag as many other synth objects of the same [software](#)

synthesizer as you like onto the tracks and program them separately.

## Effects and mix down of synth objects

Just like [audio](#)

objects, synth objects can be edited with any available master effect. Please read the chapter on "Audio effects" for more information.

In the real-time mixer, it is possible to exactly adjust the level of every synth track.

The mix down function mixes all tracks, including the synth objects, into one file so that tracks and computing power for new objects are released.

# Atmos

Atmos is a synthesizer which can be used to easily create realistic nature sounds in no time. From thunder and lightning to animal sounds and [traffic](#) noise, Atmos helps you design natural-sounding atmospheric noises for your projects.



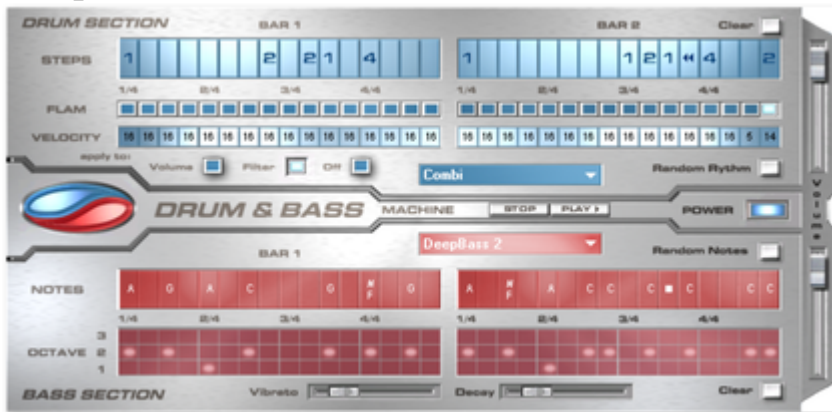
- In the upper border window, select the top category "Scenario". You can select a desired nature sounds category (for example, "Thunder and Lightning").
- In the middle of the window, a collection of control elements appears for designing the desired "Ambience". Each element has its own description (e.g. "Thunder") and two faders, i.e. "Volume" and "Intensity". The "volume" control adjusts the loudness portion of the element. The "Intensity" [fader](#) controls the behavior of the sound, depending on controller element. For example, with "Thunder", you can set how often thunder and lightning should sound; with "Rain", the strength of the rain can be regulated (if moved to the far left, light rain can be heard, while if moved to the far right, a downpour with loud splashing noises is audible).
- At the bottom right border you will find a master volume fader with which the master volume of the synthesizer can be set. Furthermore, the "Randomize" setting is also located here. This way you can change the settings of the control elements by yourself.

## Drum & Bass machine 2.0

The Drum & Bass machine is a dual synthesizer, uniting both distinct styles of drum'n'bass in one piece of equipment to produce fast beat crashes and rumbling bass lines. With the Drum & Bass machine you need no special skills to create authentic sounds for your drum'n'bass songs.

A tip: The typical speed for Drum'n'Bass is usually around 160-180 BPM. The Drum & Bass machine also fits in perfectly with other music styles, e.g. bigbeat (120 BPM) or trip hop (80-90 BPM).

### Setup



The top half of the synthesizer controls the rhythm section, the bottom half controls the bass section. Between the two, on the left side you will see a symbol where both sections can be turned on and off individually. You can turn off the bass section, for example, so that you take only the drum section break into the arrangement. The MAGIX [Movie](#)

Edit Pro 16 arrangement mix will then only include the drum section in the mix file.

The volume control is on the right border, controlling the volume for both sections. The play and stop buttons allow you to listen to your drum'n'bass creations up front in MAGIX Movie Edit Pro 16.

The "Drum'n'Bass" label covers a [menu](#) containing functions to load and save drum'n'bass patterns (Load machine state/Save machine state), and functions to delete or generate patterns (Clear all/Random all).

The [submenu](#)

"Velocity presets" contains some help functions for programming of the velocity row.

### The rhythm section (top half)

You can easily create complex and authentic jungle break beat sounds. In a professional recording studio, jungle break beats are created by dividing any given drum loop into several small "bits" and putting them back together in a different order. This lengthy process is significantly simplified by the Drum & Bass machine. You just have to design your own new play sequence.

You set up the new sequence in the top ("steps") row. The blue cells indicate the individual sections ("notes") for the subdivision of the loop.

A left mouse click on one of the blue cells allows you to select one of six possible symbols. Each symbol represents a different note or other way of playing the note. Every time you click on one of the blue cells, the next symbol is chosen.

Rely on your own intuition and creativity when programming your beats. It is not absolutely necessary to know the exact meaning of each individual symbol in order to create cool and authentic beats.

Summary symbol description:

**1:**

Play drum loop from beginning

**2:**

Play drum loop from the second note

**3:**



Play drum loop from the third note

**4:**

Play drum loop from the fourth note

**Backward symbol:**

Play backwards from this point

**Stop symbol:**

Stops play

The right mouse [button](#) allows you to delete the step cells individually. The "Clear" [button](#) on the right deletes all step cells; the drum loop is played in its original sequence. The "Random rhythm" button generates a random sequence. You can then alter the rhythm as you wish.

By clicking on the blue [field](#) in the bottom part of the rhythm section you open a pop-up [menu](#) where you can select the drum loop sound. If you select a different drum loop, it will be loaded and played as programmed by you.

In the "Flame" row you can set the note to be played twice quickly in succession instead of only once, allowing you to program rolls and fill-ins.

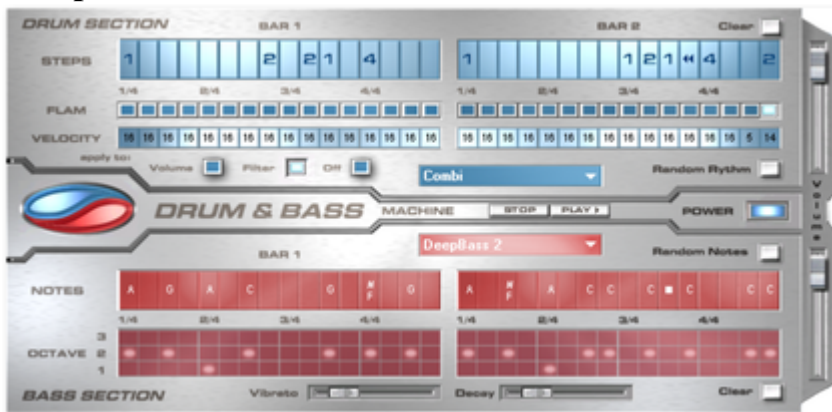
The "Velocity" row allows you to set intensity values between 0 and 16 with the mouse (left mouse click increases value, right mouse click decreases value). Use the three buttons under the "Velocity" row to determine how these values will affect the sound of your loop. If you select "Volume", the velocity value alters the volume for this cell (16 = loud, 0 = quiet). If you select "Filter", the velocity value alters the filter strength for this cell (16 = sharp, 0 = muffled). The "None" [button](#) blocks use of the velocity values.

## The bass section (bottom half)

The bass section allows you to create the right bass lines for your rhythm quickly. As in the rhythm row, there are two-step rows.

- With the first "Notes" row, you determine the sequence of the notes, i.e. the sound sequence.
- By clicking on a cell with the left mouse [button](#), you open a pop-up window, where you can select the notes.
- By clicking with the right mouse [button](#), you delete a cell.
- If you click on an empty cell with the right mouse button, you will see a "Stop" symbol. This function is similar to that in the rhythm section, i.e. it stops the bass sound at this point.
- In the "Octave" row you can determine the bass octave sound. Octave 1 creates a deep tone, Octave 3 a high tone. You can only set the octave values if there is a note in the row above.
- As in the rhythm section, there are also buttons for "Clear", "Random notes", and a red selection [field](#) at the top border of the bass section. The red selection field allows you to set the bass sound.
- Underneath the step rows, you will also find two sliding controls for sound adjustment. You can use the "Vibrato" control to make the bass tone "swing" at its pitch. If the control is pushed all the way to the right, the swing will be stronger; all the way to the left will have no effect on the pitch.
- With the "Delay" controller you can set a time for the sound to completely fade out. All the way to the right makes the sound fade out quickly (after approx. ¼ second); all the way to the left means ongoing sound.

## Setup



The top half of the synthesizer controls the rhythm section, the bottom half controls the bass section. Between the two, on the left side you will see a symbol where both sections can be turned on and off individually. You can turn off the bass section, for example, so that you take only the drum section break into the arrangement. The MAGIX [Movie](#)

Edit Pro 16 arrangement mix will then only include the drum section in the mix file.

The volume control is on the right border, controlling the volume for both sections. The play and stop buttons allow you to listen to your drum'n'bass creations up front in MAGIX Movie Edit Pro 16.

The "Drum'n'Bass" label covers a [menu](#) containing functions to load and save drum'n'bass patterns (Load machine state/Save machine state), and functions to delete or generate patterns (Clear all/Random all).

The [submenu](#)

"Velocity presets" contains some help functions for programming of the velocity row.

### The rhythm section (top half)

You can easily create complex and authentic jungle break beat sounds. In a professional recording studio, jungle break beats are created by dividing any given drum loop into several small "bits" and putting them back together in a different order. This lengthy process is significantly simplified by the Drum & Bass machine. You just have to design your own new play sequence.

You set up the new sequence in the top ("steps") row. The blue cells indicate the individual sections ("notes") for the subdivision of the loop.

A left mouse click on one of the blue cells allows you to select one of six possible symbols. Each symbol represents a different note or other way of playing the note. Every time you click on one of the blue cells, the next symbol is chosen.

Rely on your own intuition and creativity when programming your beats. It is not absolutely necessary to know the exact meaning of each individual symbol in order to create cool and authentic beats.

Summary symbol description:

**1:**

Play drum loop from beginning

**2:**

Play drum loop from the second note

**3:**

Play drum loop from the third note

**4:**

Play drum loop from the fourth note

**Backward symbol:**

Play backwards from this point

**Stop symbol:**

Stops play

The right mouse [button](#) allows you to delete the step cells individually. The "Clear" [button](#) on the right deletes all step cells; the drum loop is played in its original sequence. The "Random rhythm" button generates a random sequence. You can then alter the rhythm as you wish.

By clicking on the blue [field](#) in the bottom part of the rhythm section you open a pop-up [menu](#) where you can select the drum loop sound. If you select a different drum loop, it will be loaded and played as programmed by you.

In the "Flame" row you can set the note to be played twice quickly in succession instead of only once, allowing you to program rolls and fill-ins.

The "Velocity" row allows you to set intensity values between 0 and 16 with the mouse (left mouse click increases value, right mouse click decreases value). Use the three buttons under the "Velocity" row to determine how these values will affect the sound of your loop. If you select "Volume", the velocity value alters the volume for this cell (16 = loud, 0 = quiet). If you select "Filter", the velocity value alters the filter strength for this cell (16 = sharp, 0 = muffled). The "None" [button](#) blocks use of the velocity values.

### **The bass section (bottom half)**

The bass section allows you to create the right bass lines for your rhythm quickly. As in the rhythm row, there are two-step rows.

- With the first "Notes" row, you determine the sequence of the notes, i.e. the sound sequence.
- By clicking on a cell with the left mouse [button](#), you open a pop-up window, where you can select the notes.
- By clicking with the right mouse [button](#), you delete a cell.
- If you click on an empty cell with the right mouse button, you will see a "Stop" symbol. This function is similar to that in the rhythm section, i.e. it stops the bass sound at this point.
- In the "Octave" row you can determine the bass octave sound. Octave 1 creates a deep tone, Octave 3 a high tone. You can only set the octave values if there is a note in the row above.
- As in the rhythm section, there are also buttons for "Clear", "Random notes", and a red selection [field](#) at the top border of the bass section. The red selection field allows you to set the bass sound.
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- With the "Delay" controller you can set a time for the sound to completely fade out. All the way to the right makes the sound fade out quickly (after approx.  $\frac{1}{4}$  second); all the way to the left means ongoing sound.

## The rhythm section (top half)

You can easily create complex and authentic jungle break beat sounds. In a professional recording studio, jungle break beats are created by dividing any given drum loop into several small "bits" and putting them back together in a different order. This lengthy process is significantly simplified by the Drum & Bass machine. You just have to design your own new play sequence.

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- By clicking with the right mouse [button](#), you delete a cell.
- If you click on an empty cell with the right mouse button, you will see a "Stop" symbol. This function is similar to that in the rhythm section, i.e. it stops the bass sound at this point.
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- With the "Delay" controller you can set a time for the sound to completely fade out. All the way to the right makes the sound fade out quickly (after approx.  $\frac{1}{4}$  second); all the way to the left means ongoing sound.

# Mixer



MAGIX [Movie Edit Pro 16](#) includes a real-time mixer with a master effects section that professionally mixes all the tracks within an arrangement. The mixer can be opened by pressing the "M" key or accessed via the [toolbar](#) in the main window ("View -> Mixer").

In this chapter

[Mixer tracks](#)

[FX tracks \(effect tracks\)](#)

[Master track \(Plus version\)](#)

[Volume and panorama automation](#)

## Mixer tracks

Each track has its own volume or brightness [fader](#). This fader also affects added [MIDI](#) objects.



The stereo position for each [audio](#) track is defined with the Pan controls.

The "Solo" [button](#) switches a track to solo mode, i.e. all other tracks are muted. The "Mute" [button](#) mutes a track.

Double clicking any of the controls resets them to their default passive setting (no boost or cut in level), and no processor output will be required.

### Track effects

Besides audio effects in the object (audio cleaning, reverb/echo, timestretch/resample, Surround, etc.), a separate track effects rack with equalizer, reverb/echo, compressor as well as plug-ins can be used in each mixer track.



The plug-ins are loaded via the plug-ins slot.



You can open the track audio effects rack with the FX button.

A light blue track FX button indicates that effects are active in the track. Please read the chapter "[Audio Effects](#)

" for functionality and handling of the individual audio effects.

### DirectX audio plug-ins

The MAGIX [Movie](#)

Edit Pro 16 supports DirectX audio plug-Ins. These are usually effects modules such as reverb, equalizer, etc.

The DirectX system must be installed on your PC prior to using the DirectX plug-Ins ? a manual installation is only required on rare occasions. Generally, DirectX is already available through the Windows installation. If your PC does not have the DirectX System installed or if it is out of date, you can find a DirectX installer on the MAGIX Movie Edit Pro 16 disc. Of course, DirectX plug-ins have to be installed first, depending on the [plug-in](#) used.



Two so-called "slots" for track effects are located in the channel strip of the mixer for the corresponding track, plus in the FX tracks.

Clicking on the small triangle will let you select an effect from the list. Select "No effect" to remove a plug-in from the slot. A left click temporarily disables the plug-in. Active plug-ins are displayed in light blue. Right clicking on the slot opens the settings [dialog](#) of the [plug-in](#)



## FX tracks (effect tracks)



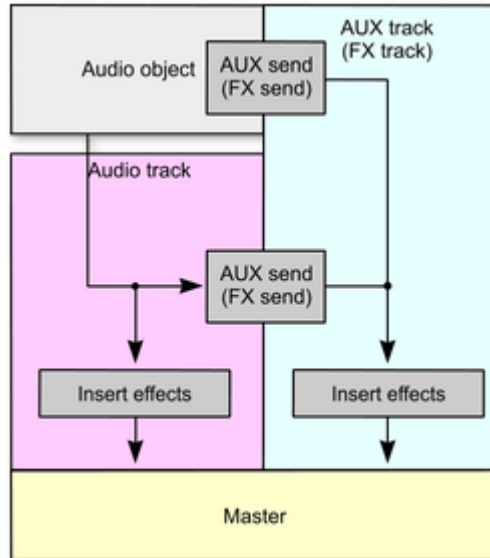
Two FX send controllers (FX1 and FX2) are located below the [plug-in](#) slots.

You can determine the volume at which you want the signal to be routed to the two available FX tracks. An FX track is a complete, additional mixer track which provides a complete track FX rack and two plug-in slots for use as a send effect.

A send effect differs from a normal effect found in the track (insert) insofar as it can edit the signals from multiple tracks or objects simultaneously.

A send effect roughly corresponds to the scheme of a parallel switch, while an insert on a track is like a series switch.

A special feature offered by MAGIX [Movie](#) Edit Pro 16 is that [audio](#) objects can also send directly to the FX track.



The FX are usually hidden in the mixer. They will be displayed as soon as one of the FX send controllers is used.

In the first FX track, the reverb function is activated as standard, since it is the most important application of the send effects.

The volume controllers regulate the volume of the FX track and correspond with the old AUX return controller. "Mute" is used to switch the FX portion on and off. "Solo" enables you to single out FX individual tracks. The track's peak meters which send to the FX track are displayed in grey.

## Master track (Plus version)

The FX [button](#) and the [plug-in](#) slots function exactly like in the tracks. The FX [button](#) will open the master [audio effects rack](#). The complete mixer settings including the FX tracks can be reset with the "**Reset**

" button.

**MAGIX Mastering Suite:** Opens the [MAGIX Mastering Suite](#)

**5.1 Surround:** This button switches the mixer to "[Surround](#)" mode.

Both faders control the total volume.



### **Link button**

: If you deactivate the link button, you can control the volume of the right and left channels individually.

## Volume and panorama automation

You can automate the volume and panorama curves on a mixer track. This means you can record this movement of the track volume faders and panorama controls while playing the [movie](#). This way, for instance, you can simulate the movement of a sound source and volume adjustment from left to right instantly during playback.



As long as the "**Auto**" [button](#) in a track is active, all movements of the volume and panorama controller are recorded.

The automation is displayed as a curve in the arranger and can be edited later with the mouse. Unlike the automation curve of the mixer, the dynamic effects are track-dependent, i.e. regardless of the objects contained in the track.

# Audio effects

For more information about this, see the section entitled "[Audio effects](#)" in the chapter "[Effects and titles](#)"

# 5.1 Surround

MAGIX [Movie](#)

Edit Pro 16 supports playback and export in real 5.1 Surround.

In this chapter

[Requirements](#)

[Importing and exporting surround audio files](#)

[The mixer in Surround mode](#)

[5.1 Surround Editor](#)

## Requirements

You will require a sound card or a sound chip which is integrated into the computer's [motherboard](#) with six individual outputs to playback the individual channels:

- front left (**L**) / right (**R**)
- centre (**C**) / subwoofer (**LFE**)
- back left (**Ls**) / right (**Rs**)

Surround playback is possible with all [audio](#) driver models (see [Playback settings](#)), ([Wave](#), DirectSound, ASIO).

### **DirectSound**

is supported by most of the standard sound cards.

### **Wave drivers**

are similarly supported by many standard sound cards; however, individual sound cards (for example, Soundblaster) require access to DirectSound.

Note: 24-bit Surround playback is often not possible, therefore please select 16-bit output.

For Surround output with **ASIO**

drivers, you will require a 6-channel-capable ASIO driver (e.g. MAGIX Low Latency). Older multi-channel audio cards that activate their stereo output couples via multiple separate drivers are not suitable.

Output of the six output signals is achieved in all driver models in the output channels in the same (standardized) order:

**Channels 1/2: L-R**

**Channels 3/4: C-LFE**

**Channels 5/6: Ls-Rs**

When using [WAV](#)

or ASIO drivers, the loudspeaker settings normally have to be changed to 5.1 playback in the control panel.

In order to do this you have to start the Control Panel for "Sounds and audio devices" and select "Loudspeaker settings", "Advanced", "5.1 Surround loudspeakers".

On most systems the program does this automatically while using DirectSound.

# Importing and exporting surround audio files

## Import

When importing MPEG2 files with Dolby Digital sound (for example, VOB files from DVDs or DVB-TV recordings) you can choose from two different application cases:

- **Mixdown:** The surround sound is displayed as an [audio](#) object under the video object, playback of the surround track is reduced and recalculated to stereo playback. Use this option if you don't wish to edit the surround sound, but rather wish to export it. You can also use it if you think that a stereo export is enough to meet your requirements.

For the import of surround sound as a mixdown the free activation of the Dolby Digital stereo codec is required.

- **Surround mix:** The individual surround channel pairs (L-R, C LFE, Ls-Rs) are split into three audio tracks as separate objects and the mixer is then set to Surround Mode (only in [MAGIX Movie Edit Pro 16 Plus](#), optional fee-based activation of the Dolby Digital surround codec would be required). In this mode you can adjust the surround mix.

In [MAGIX Movie Edit Pro 16](#) the import of Dolby Digital surround is always executed as a mixdown.

[MAGIX Movie Edit Pro 16 Plus](#) can also import interleaved [wave](#) files (multi-channel wave files), multi-channel Windows Media Audio and MP3surround files. A surround mix is always created.

**Note:** The surround channels of [AVCHD](#) video streams are not imported, in this case only a stereo signal is used.

## Export

Surround mix exports can occur in any one of the following formats:

- 6-channel PCM files (interleaved [wave](#))
- Windows Media files (as a Surround soundtrack of a Windows Media Video or [WMV-HD](#) disc)
- [MPEG-2](#) files with Dolby Digital sound track (requires activation of the [Dolby Digital codec](#))

The files created are fully [compatible](#)

with the normal file formats, this means that they can also be played on computers incapable of playing Surround (in normal stereo).

The export is performed via the same [menu](#) commands (e.g. "File -> Export [movie](#) -> [Audio](#) as wave") like the normal stereo export. You will then be asked if the export should be in stereo or Surround format.

## Import

When importing MPEG2 files with Dolby Digital sound (for example, VOB files from DVDs or DVB-TV recordings) you can choose from two different application cases:

- **Mixdown:** The surround sound is displayed as an [audio](#) object under the video object, playback of the surround track is reduced and recalculated to stereo playback. Use this option if you don't wish to edit the surround sound, but rather wish to export it. You can also use it if you think that a stereo export is enough to meet your requirements.

For the import of surround sound as a mixdown the free activation of the Dolby Digital stereo codec is required.

- **Surround mix:** The individual surround channel pairs (L-R, C LFE, Ls-Rs) are split into three audio tracks as separate objects and the mixer is then set to Surround Mode (only in MAGIX [Movie](#) Edit Pro 16 Plus, optional fee-based activation of the Dolby Digital surround codec would be required). In this mode you can adjust the surround mix.

In MAGIX Movie Edit Pro 16 the import of Dolby Digital surround is always executed as a mixdown.

MAGIX Movie Edit Pro 16 Plus can also import interleaved [wave](#) files (multi-channel wave files), multi-channel Windows Media Audio and MP3surround files. A surround mix is always created.

**Note:** The surround channels of [AVCHD](#) video streams are not imported, in this case only a stereo signal is used.

## Export

Surround mix exports can occur in any one of the following formats:

- 6-channel PCM files (interleaved [wave](#))
- Windows Media files (as a Surround soundtrack of a Windows Media Video or [WMV](#)-HD disc)
- [MPEG-2](#) files with Dolby Digital sound track (requires activation of the [Dolby Digital codec](#))

The files created are fully [compatible](#)

with the normal file formats, this means that they can also be played on computers incapable of playing Surround (in normal stereo).

The export is performed via the same [menu](#) commands (e.g. "File -> Export [movie](#) -> [Audio](#) as wave") like the normal stereo export. You will then be asked if the export should be in stereo or Surround format.



## Export

Surround mix exports can occur in any one of the following formats:

- 6-channel PCM files (interleaved [wave](#))
- Windows Media files (as a Surround soundtrack of a Windows Media Video or [WMV](#)-HD disc)
- [MPEG-2](#) files with Dolby Digital sound track (requires activation of the [Dolby Digital codec](#))

The files created are fully [compatible](#)

with the normal file formats, this means that they can also be played on computers incapable of playing Surround (in normal stereo).

The export is performed via the same [menu](#) commands (e.g. "File -> Export [movie](#) -> [Audio](#) as wave") like the normal stereo export. You will then be asked if the export should be in stereo or Surround format.

## Export Dolby Digital Surround via Smart Encoding

You can also burn material to be exported with surround sound again without the need for the Dolby Digital codec (in MAGIX [Movie](#) Edit Pro 16 or MAGIX Movie Edit Pro 16 Plus without Dolby Digital encoder activation) to DVD or export the corresponding [MPEG](#) files while keeping 5.1 Surround Sound. To do so, use the "Smart Rendering" option which transfers the unprocessed parts of the output material without renewed encoding. Read more on this in the MPEG Encoder Settings annexe, [General Settings](#) section.

The import has to be executed as a mixdown, the [audio](#) material cannot be changed (no fades, no audio cleaning, no volume adjustment). Harder steps, for example, for removing commercials are allowed, they may not happen precisely according to the [frame](#), but at the GOP (group of pictures) borders.

## The mixer in Surround mode



To activate Surround playback, open the mixer (M key) and click on "5.1 Surround" [button](#) in the master.

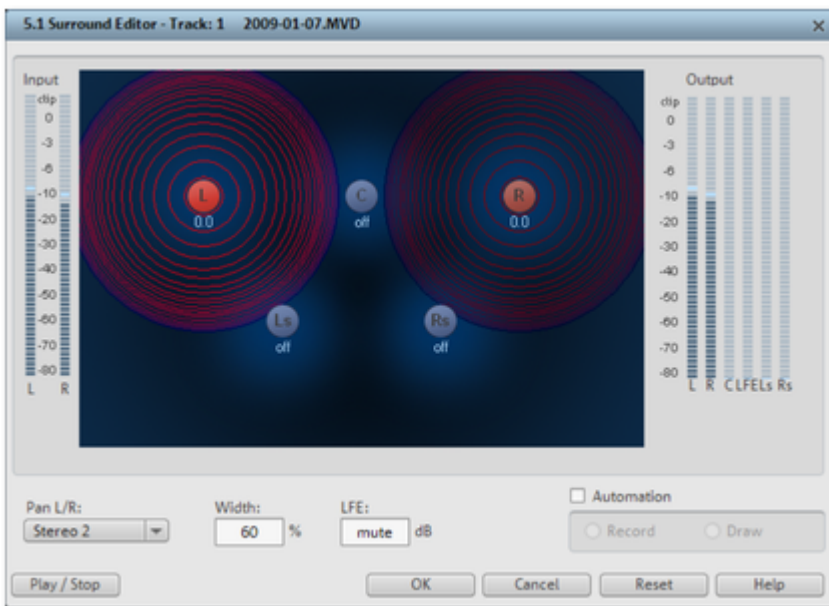
In the master, six peak meters for the individual channels are provided. The normal panorama [button](#) turns into a representative display of the Surround editor (see below), which can be opened by clicking on the display.

The Surround sound editor is also available to the effects tracks. For example, you can send the original track to the front **L/R speakers**, the FX track however will remain at the rear **L/R speakers**

The master volume is applied to all channels, here the left controller influences channels L and Ls, the right controller; channels R and Rs and the middle value of both controller; the channels C and LFE. The master plug-ins are only applied to the front channels.

The full effects palette of the mastering effects rack in MAGIX Mastering Suite is not available in 5.1 Surround mode, but rather only the compressor and the parametric equalizer (from the Mastering Suite) are provided. The settings of these effects have the same effect on all six channels.

## 5.1 Surround Editor



The selected mixer track's 5.1 Surround editor allows you to arrange the [audio](#) signal of a track (displayed as two red sound sources) in stereo space. The signal is dispersed to the 5 (blue) loudspeakers which represent the individual Surround channels.

There are 6 channels:

**L:**

front left

**R:**

front right

**C:**

center

**Ls:**

back left/left Surround

**Rs:**

back right / right Surround

**LFE** subbass (Low Frequency E

ffect) channel

Dispersing the signal to the 5 loudspeakers occurs after the sound source emits a sound [field](#)

of a certain level (displayed as red circles). The further away a loudspeaker's source is, the lesser its share of the corresponding loudspeaker channel. The position of the loudspeaker can be moved with the mouse.

The subbass share (**LFE**)

is set directly from the corresponding value table. It can also be changed by dragging the mouse.

There are various modes in which you can use the source signal:

- **Mono:** The (stereo) source signal is seen as mono material, the left and right channels are mixed together and arranged together. The original stereo information is lost here.
- **Stereo 1:** Similar to mono mode insofar as the left and right channels are moved together, but only a portion of the left source is audible in the loudspeakers **L** and **Ls** and only a portion of the right source in the right channels **R** and **Rs**. The stereo information remains as intact as possible.
- **Stereo 2:** The left and right channels can be moved individually. The distance between the left and right source is retained when you move the left source. You can move an individual source by holding down the "Alt" key.
- **Center/LFE:** Only the left channel is arranged. In return, the LFE share is drawn solely from the

right channel. This mode is only important for importing Surround material.

### **"Width"**

determines the level of the sound field of an individual source.

### **Automation:**

Panning of the sound source on the loudspeaker can be automated to simulate movements in the room.

For this to happen **"Automation"**

must be activated. There are two methods to create automations: record and draw.

### To **record**

(when automation is on), the sound source is moved between the loudspeakers during playback. When recording the automation, the "Record" check box lights up red.

The draw function is an alternative to drawing out complex movements. When drawing in active mode, all panning movements are transmitted to the time interval between the start and end marker (when the mouse [button](#)

is held). You can thus draw the entire movement curve for the selected time range.

### **"Reset"**

deletes surround automation from the track.

There is no automation of the parameters for width and LFE, of the distance between the left and right source in "Stereo 2" mode, or of the loudspeaker positions.

# Scrubbing

Scrubbing originates from a time when tape machines still dominated. The function is suitable for quickly previewing individual passages of a film or piece of music.

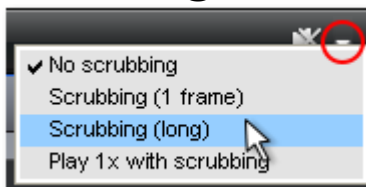
This was technically implemented in these devices by keeping the tape head on the tape itself, but the motor doesn't drive the tape rolls in this case. Instead the tape is "manually" set to the desired position. In this way, positions where a cut should be made, for example, can be set fairly precisely. The disadvantage of this method is that the pitch changes proportionate to the playback speed - like when a record is played too quickly or too slowly.

Scrubbing in MAGIX [Movie](#)

Edit Pro 16 certainly behaves a little differently than its analog predecessor; instead, it plays short samples of the material at the original speed.

**Note:** In order to preview individual [audio](#) objects, use the "[Preview](#)" mouse mode.

## Scrubbing: Activate



Scrubbing can be activated via the [menu](#) beside the speaker [button](#) on the upper edge of the arrangement window.

## Scrubbing: Modes

### No scrubbing

: Scrubbing is inactive. If the playback marker is set or moved, then sound will not be played.

### Scrubbing (1 frame)

: Scrubbing is active and samples are only 1 (video) frame in length. The speed is 25 fps, i.e. 1/25 second. This mode is suitable for positioning the playback marker exactly.

### Scrubbing (long)

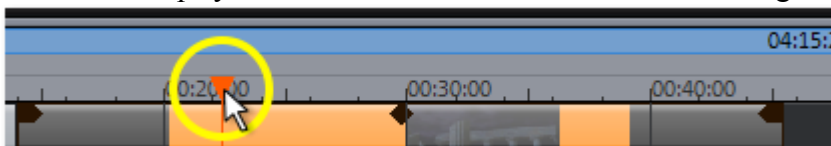
: Scrubbing is active, the sample length amounts to approx. 0.5 seconds. In this mode, locating specific events is particularly easy.

### Play 1x during scrubbing

: If this option is active, the current position will be played one time. If it is inactive, then it will be repeated.

## Scrubbing: Apply

If a scrub mode is selected, then you can simply set the playback marker with the mouse at a location on the timeline. Hold down the mouse [button](#) and move the playback marker to different locations in the arrangement.



Scrubbing also functions via the keyboard. Using the jog and shuttle wheels in the video monitor also enables scrubbing, even for different [hardware](#) controllers, which makes the program feel just like an analog video editing system!

# Mix down of audio objects

If the arranger becomes too full to manage, the system is out of RAM, or you just want to "summarize" your production, use the mix down function to convert the entire [audio](#) arrangement into a single audio file. Just click on the mix down [button](#) in the [button](#) bar or select the function from the "Processing" [menu](#).

You can choose a name and a destination for storing the mix down object. The default directory is "My audio/video".

Storage of the audio arrangement will take up a little more space on your hard-drive, but it requires less RAM for playback than an unmixed entire arrangement.

Note: The mix down effect optimizes the volume automatically. Even if the mix down function is used various times, you will not lose [audio](#) quality.

# Managing video projects

In this chapter

[Backup copy](#)

[Load backup project...](#)

[Clean-up wizard](#)



# Backup copy

Files must be saved to be able to be easily retrieved in case of a hard drive crash or some other error.

In this section:

[Copy movie/project and media to folder](#)

[Burn project/film and media onto CD/DVD](#)

[Restore disc project from \(S\)VCD/video DVD](#)

## Copy movie/project and media to folder

This [menu](#) option allows you to put a complete MAGIX [Movie](#)

Edit Pro 16 arrangement, including all applied multimedia files, into one folder. This is especially useful if you want to reuse or archive such an arrangement later on, or if the files are located on multiple storage devices (CDs, DVDs, etc) so that you continually have to change them during loading. Effects files used are also saved in a folder together with the other files.

If you select the option, "**Copy [disc project](#), movies, and media into folder**", all movies in the current disc [project](#)

, including all of the related media, are put together and copied into the chosen folder.

**Hint:** MAGIX Movie Edit Pro 16 also features DV logging. You no longer need to save large DV-[AVI](#) and [audio](#)

files, since MAGIX Movie Edit Pro 16 saves the position of this material on the DV tape and imports missing files automatically when reloading the DV tape.

A [dialog](#)

opens where you can specify the path and name of the video.

Shortcuts:

Copy movie and media into folder                      Shift + R

Copy project and media into folder...              Ctrl + Q

## Burn project/film and media onto CD/DVD

Use this option to burn the film as well as all associated files to disc. To do so, you must have a burner installed on your computer and a blank CD must be inserted.

If you choose the option "Burn [project](#)

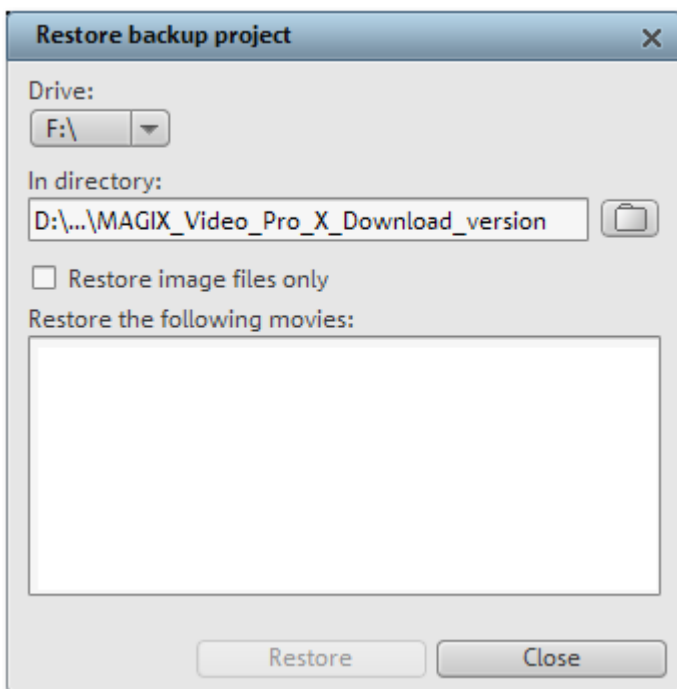
and media", the current project and all of the associated media files are grouped together and burned onto disc.

Even larger projects can be burned straight to disc. The project, if necessary, will be split up and burned automatically to multiple discs. A [restore](#)

program which is burned to the first disc of this type of backup guarantees that the backup can be restored without any problems.

Keyboard shortcut: Ctrl + Shift + R

## Restore disc project from (S)VCD/video DVD



With this [menu](#) command, you can [restore](#) a [project](#) backup that has been saved to a CD/DVD. The disc has to be burned with the option "**Add project backup**" (see "[Burn disc dialog options](#)").

You can select which movies on the disc should be restored by selecting them in the list. You will also enter the folder where the project should be saved. As subfolder "Backupxx" will be created for every restored project and all of the project files from the disc will be saved there. All restored movies will be loaded into MAGIX [Movie](#)

Edit Pro 16 for editing.

If you select the option "**Restore [image files only](#)**"

, only the original image files contained on the disc are restored.

Keyboard shortcut: Ctrl + Alt + R

## Load backup project...

This option loads an automatically created slideshow backup. This type of automatic backup gets the file extension MV\_ (underscore). This command is only intended for use in emergencies, for example, if you unintentionally saved your change and wish to return to the previous version of the [movie](#)

Keyboard shortcut: Alt + O

### Tip:

Under "File -> Settings -> Program...", you can determine how often an automatic backup will be created in the "System" tab under "Automatic backup".

## Clean-up wizard

The clean-up wizard helps you delete projects from your hard drive, including all media files. Use this function to free up disk space for future projects.

### Caution

: If the files you used in the slideshow have also been used in other slideshows (like trailers, opening music, etc.), then you should make backup copies of these files beforehand.

Shortcut: Ctrl + Alt + G

## **Delete specific files**

Choose this option if you would like to select certain files for deletion. In the file selection [dialog](#), you can select the desired files. In the next step, the clean-up wizard searches for other files which belong to your selection. Using this method, you can delete an entire [movie](#) with all of its accompanying media, help, [project](#), and backup files. Before they are deleted, you will receive relevant information in a [dialog](#) and a confirmation request.

## **Search and delete superfluous files**

Choose this option if you would like to find unnecessary files or free up some space on your hard drive. The clean-up wizard automatically looks for extraneous files created during use of MAGIX [Movie Edit Pro 16](#). Before they are deleted, you receive relevant information in a [dialog](#) and a confirmation request.

## **Advanced**

"Advanced" lets you set which files and folders should be included in the cleaning process.

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"Advanced" lets you set which files and folders should be included in the cleaning process.

# Options for using the final movie

In this chapter

[Create playable disc](#)

[Export movie](#)

[Export audio/video](#)

# Create playable disc

MAGIX [Movie](#) Edit Pro 16 allows discs to be burned for playback on conventional playback devices (e.g. DVD players, Blu-ray players). For more information, please see "[Burning discs](#)".

# Export movie

You can export your [movie](#) in various video formats. The options available vary according to the selected format.

## Presets

: These are the typical settings for the selected format and the most important applications.



You can save your personal settings by pressing the "Save" [button](#), or remove them from the list by pressing the "Delete" [button](#)

**Export settings:** You can set up the general export parameters like resolution, page proportions and [frame](#) rate in the dialogs. Select the most frequently used values from the list fields; to set your own values click on the "..." button. The "Advanced" button opens the specific settings for the selected video format. "File" allows you to export your file to a different folder than the one specified as the [preset](#). With "

## Overwrite file automatically

", you can perform multiple exports from the same file.

## Other

: Under "Other" you also have the option of switching off your computer automatically after long encoding processes and limiting the export to the selected area (start to end marker).

**Output after export:** Some formats allow special playback options (e.g. DV-[AVI](#) on the camera or [WMV](#)

export with output via Bluetooth to your mobile phone).

In this section:

[Video as AVI](#)

[Video as DV-AVI](#)

[Video as MPEG video](#)

[MAGIX video export](#)

[Video als Quicktime Movie](#)

[Uncompressed movie](#)

[Video as MotionJPEG AVI](#)

[Movie as sequence of individual pictures](#)

[Windows Media Export](#)

[Video as RealMedia video](#)

[Exporting as Flash](#)

[Video as MPEG-4 video](#)

[Audio as MP3](#)

[Audio as WAV](#)

[Export as transition...](#)

[Single frame as BMP](#)

[Single frame as JPG](#)

[Animated GIF](#)



## Video as AVI

When exporting to [AVI](#) video you can set and configure the size and [frame](#) rate of the AVI video and the compression codec for [audio](#) (audio compression) and video. Please also observe the general information on [AVI video formats](#)

.  
Keyboard shortcut: Alt + A

## Video as DV-AVI

This option exports the video as a DV encoded [AVI](#). You will be asked for which video standard you want to export DV data. [PAL \(Europe\)](#) or NTSC (USA)? The arrangement can be easily transferred to the Digicam via the FireWire interface. The window will provide further information on all available options. You can access it via the [button](#) "**Advanced...**" in the "Export" [dialog](#)

Keyboard shortcut: Alt + B

## **Video as MPEG video**

[MPEG](#) stands for "Motion Picture Experts Group" and is a high-performance compression format for [audio](#)

and video files.

Details on the settings of the MPEG encoder can be found in the "MPEG encoder settings" appendix.

Keyboard shortcut: Alt + C

## **MAGIX video export**

Exports the [movie](#) in MAGIX video format. This format is used for video recording by MAGIX video [software](#)

and is optimized for digitally edited high-quality video material.

Keyboard shortcut: Alt + D

## Video als Quicktime Movie

Exports the [movie](#) in QuickTime movie format. This enables streaming playback of [audio](#) and video files over the Internet.

As with RealMedia export, appropriate adjustments can also be made for video size, [frame](#) rate, and codec settings. However, the export [dialog](#) does not permit you to add commentary to the video.

For QuickTime files (\*.[mov](#)) you have to install the QuickTime library.

Keyboard shortcut: Ctrl + E

## Uncompressed movie

When exporting an uncompressed [AVI](#) video file, you can adjust the size and [frame](#) rate of the AVI video you wish to create.

### Warning

: This will create very large files!

Keyboard shortcut: Alt + U

## **Video as MotionJPEG AVI**

Opens the export [dialog](#) for [AVI](#) video in Motion JPEG format. This format is supported by digital picture frames, for example.

## Movie as sequence of individual pictures

This option exports the video as a sequence of single frames in bitmap format. This means that for every video [frame](#), a graphic file will be created. The [image](#) count can be determined in the export [dialog](#) under "Frame rate".

Keyboard shortcut: Alt + V



# Windows Media Export

Exports the arrangement in Windows Media format. This is a universal [audio](#)/video format from Microsoft. The setting options in the **Advanced** [dialog](#) are correspondingly complex.

## Manual configuration

### Audio/Video codec:

Various codecs corresponding to the many versions of Windows Media (7, 8, 9) are possible. If playback compatibility problems arise, try an older codec with a lower version number.

**Bit rate mode:** Constant and variable bit rate modes are possible; however, most devices and streaming applications require a constant bit rate. For VBR two-pass modes, the [movie](#) is compressed in two passes for optimal use of the bandwidth required for highly-compressed movies on the Internet.

### Bit rate/quality/audio format:

The bit rate substantially determines the display and audio quality. The higher this is, the better your videos will look and the larger the files and the required encoding time will be. For variable bit rates, the bit rate is adapted dynamically to the requirements of the corresponding picture or sound material. Here, either the quality value of between 1-100 can be set or, for two-pass encoding, an average or maximum bit rate. For audio, the bit rate is set additionally by the audio format.

**Import from system profile (export type):** For the most used methods (other than for playback on mobile devices; for this you should use the supplied presets), e.g. Internet streaming, Microsoft provides a diverse selection of system profiles. If you have the Windows Media Encoder 9 installed (available from Microsoft as a free download), then you can edit the profiles or create your own. These can be loaded by pressing the "**Import from profile file**" [button](#)

Go to **Clip info** to insert title, author name, [copyright](#) details, and a description.

Keyboard shortcut: Alt + F

## Video as RealMedia video

Exports the [movie](#) in RealMedia movie format.

RealMedia enables streaming playback of video files via the Internet. This has a very high compression rate, but the quality is noticeably reduced. After choosing a name for your file, you can specify the bit rate of the transmission speed (modem, ISDN, etc.) at which the [audio](#) file should still be playable without any errors.

There are many options for embedding meta information for this format.

The advanced video options allow you to select the number of frames per second ("fps"), the lower the value, the less data is transferred and the lower the picture quality.

The following settings can be accessed via the "Advanced..." [button](#)

### **Audio/Video settings**

: Here you can select presets for the quality of audio or video material.

### **Clip information**

: You can enter the author, video's name, and so on, which appear in the Real player during playback.

### **Clip meta information**

: You can enter keywords for search engines here. When the RealVideo clip is uploaded to a homepage, search engines will find it using these keywords. This search engine indexing can also be switched off.

**Preprocessing:** Of special interest here is the "Two-pass encoding" [field](#), since this can be used to enhance the quality of the video. The video is compressed into two runs in order to optimize the bandwidth. You can also select various filters.

### **Video size**

: Select between video sizes of 160 x 120 and 720 x 576 pixels.

### **Profile**

: You can select at which bandwidth the video should be created, i.e. over which data connection it will be played in real time ("streamed"). The settings selected here may limit other selection options, since files for 28k modems cannot be created to be played at high quality.

Keyboard shortcut: Alt + G

## Exporting as Flash

Export of FLV files has been replaced by the more powerful H 264 export. Flash plug-ins of the new generations to playback MP4 files with H.264 material instead of FLV files.

You can select a preset labeled as "Flash Player" or click on "Advanced" and activate the "Export as website" entry for [MPEG 4 export](#)

. This will automatically create an HTML page and a SWF file with Flash Player in addition to the exported file.

When applying manual settings, AVC H.264 format with AAC sound is recommended. In order to be able to play back the file in a [browser](#), the exported MP4 file, the SWF file and the HTML file must be in the same folder. The [browser](#) needs an installed Flash [plug-in](#) (version 9.0.115.0 or higher is recommended).

## Video as MPEG-4 video

**Hint:** In order to use the [MPEG-4](#) video export feature, you will have to activate [this function first](#)

MPEG-4 is the most advanced video format available at the moment. Unlike others, it can provide high-quality pictures at the same file size.

Behind MPEG-4, you'll find a highly complex "academic" standard that operates and is supported variably according to make. To go into detail on these differences and parameters would be beyond the scope of this documentation. For this reason, indications, along with the operational manual of your device, are given that should help create executable MPEG-4 files. For more experimental users, the complete setup options of the MPEG-4 codec can be found behind the "Advanced settings..." buttons.

### **Video/Audio:**

The MPEG-4 format and the advanced AVC format are also available but have, as of yet, only been used in a few devices. MPEG4 video can be combined with AAC or AMR sound, the latter mostly in conjunction with mobile phones. The combination ACC/AAC doesn't appear very often (Apple iPod Video), ACC with AMR in contrast, not at all.

**Multiplexer:** Here you can find the so-called container formats and special options for Apple iPod and Sony PSP. MPEG-4 is usually used as an **output format**, mobile phones mostly use 3GPP.

Keyboard shortcut: Alt + K

**Note:** To import and export AVC and [MPEG-4](#) files, the MPEG-4 codec must first be [activated](#). A [dialog](#) will open if the codec is required. Files with a horizontal resolution of more than 768 pixels can only be loaded in MAGIX [Movie](#)

Edit Pro 16 Plus.

## Audio as MP3

MAGIX [Movie](#) Edit Pro 16 supplies an optional [MP3](#) Encoder for especially fast and good-sounding conversions into the popular MP3 [audio](#) format.

### **Warning:**

In order to use the MP3 export function, Windows Media Player 10 or higher has to be installed to your system.

**Hint:** The MP3 Encoder cannot be used as a codec for the audio track of [AVI](#) audio files.

### **Transmission format**

Here you can specify how you wish to send the audio file to the mobile device. Read more on this under [Transferring files](#).

### **Options**

In the "Options" section you can set the format and the compression of the audio file.

### **Bit rate:**

The "Bit rate" selection specifies the level of compression: The higher the bit rate, the higher the quality of the exported audio file. On the other hand, the bit rate determines the final file size: The smaller the bit rate, the smaller the files.

### **Mono/Stereo/5.1 Surround**

: Most mobile devices have only one loudspeaker. To save on memory, you can export in mono as well. In 5.1 Surround Mode (see Mixer in Surround Mode) you can also export in MP3surround.

### **Normalize:**

This function should always be activated. It guarantees that the music is not too loud/overmodulated or too quiet.

Keyboard shortcut: Alt + M

## Audio as WAV

The soundtrack of the [movie](#) is exported as a [WAV audio](#) file.

Keyboard shortcut: Alt + H

## **Export as transition...**

Please see "[Creating custom alpha transitions](#)"

## Single frame as BMP

Exports the [image](#) at the position of the start marker and displayed on the video screen as a BMP file.

Keyboard shortcut: Alt + M



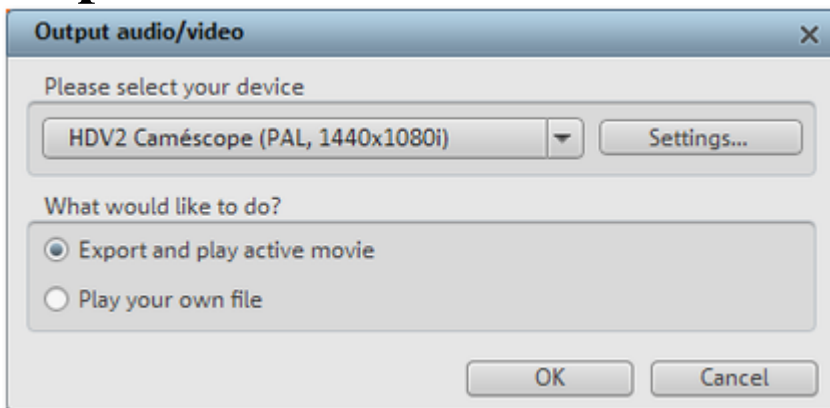
## **Single frame as JPG**

Exports the picture located at the current start marker and displayed in the video monitor as a JPG file.  
Keyboard shortcut: Alt + N

## **Animated GIF**

The video will be exported as an animated GIF file (also called "AniGIF"). This file format is supported by many mobile phones.

# Export audio/video



This window lets you transfer your finished video to external devices. Besides the camcorder options for digital camcorders (DV/HDV) and VHS recorders for playing analog video, many options for further players such as mobile video players, SmartPhones, PDAs or games consoles are also included. These are explained in the section "[Exporting to mobile devices](#)".

In this chapter

[Video playback via TV output](#)

[Playing videos on digital devices](#)

[Export DV/HDV](#)

[DV export settings](#)

[Export to mobile devices](#)

[Transfer with Bluetooth](#)

[Transfer via infrared](#)

[My device is not in the list, what should I do?](#)

## Video playback via TV output

Video or graphics cards with TV outputs allow you to transfer videos directly to external analog video recorders. The arrangement must be displayed in fullscreen mode and recorded by the external device. Make sure that the TV output in the Windows Control Panel (in "Display") is active.

**Warning:** For many graphic cards, the TV output can only be activated when a television or video recorder is connected **before** turning on the computer!

For the best video monitor quality via TV output, select "Overlay" mode. When in doubt, make sure that "Overlay" mode is selected as the video mode in the program settings ("File -> Program settings -> Display options").

You can play the video directly from the arrangement. Errors may result if the processor is overloaded by real-time calculations of video effects and transitions.

If direct playback doesn't work without errors, open the [menu](#)

item "Output video" and select "VCR -> Render and output in fullscreen". All tracks and effects are then combined as a single file. The file will be played back after this analysis.

If you would like to play a finished [movie](#) several times, export it as an [AVI](#)

file and reload it into a new movie! It should then be possible to play the file directly without constant rendering.

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## Playing videos on digital devices

The digital output always consists of two processes:

1. Exporting, i.e. compiling all tracks, video, music, effects, transitions, and titles into one single video file. This video file is created in the format required by the target device and then temporarily saved to your computer's [hard disk](#).
2. Output: In this case the created video file is transferred to the mobile device or to the camera. The data is either written to the device via FireWire as a removable device if connected to the USB port or transferred by Bluetooth or infrared.

Both processes are normally performed together. However, you can only export via "File -> Export [movie](#)" or export via the option "**Output file**" in the [dialog](#) "**Output [audio/video](#)**".

The **Settings [button](#)** opens the "[Export](#)" [dialog](#) of the file format for your selected device.

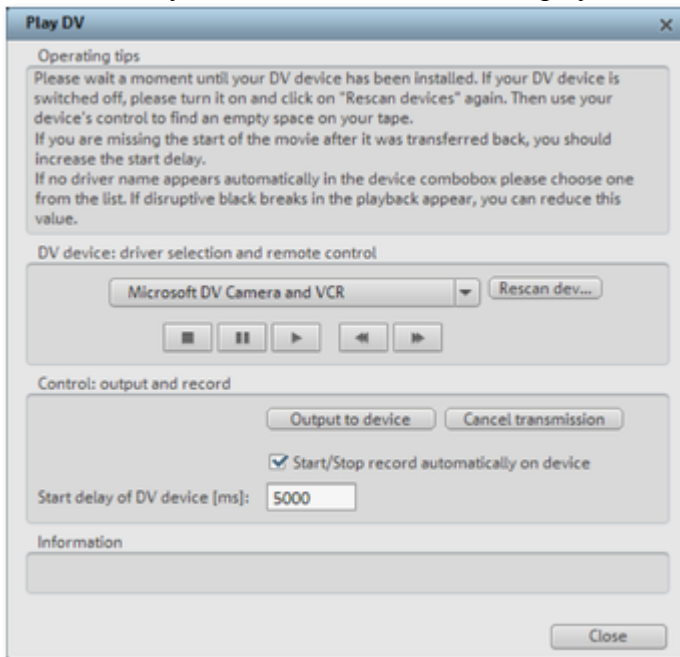
## Export DV/HDV

For digital output, please select "File -> Export [audio/video](#)", and then select **Camcorder** in the device [menu](#). For DV cameras, you can select the device **DV camera** for HDV camcorders **HDV1** or **HDV2**

"Settings" opens the respective export settings [dialog](#) (DV-[AVI](#) export for DV camcorders; [MPEG](#) export for HDV camcorders). For most applications, you should use the settings defined here.

**Advanced** takes you to the [DV export settings](#)

Now connect your camera and follow the displayed instructions.

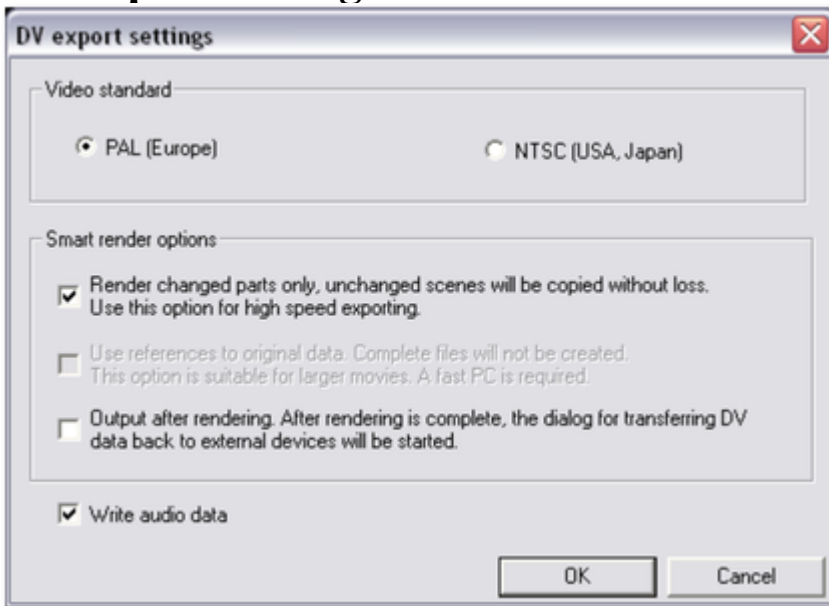


If you want to play a rendered [movie](#) on DV, then there's no need to render it again. Simply activate the "Play own DV file" option and select your DV video from the "My Audio/Video" directory.

### Tip:

Digital cameras that can record in digital via a PC connection are usually more expensive. You may be able to reduce your purchase costs considerably by buying a digital camera that cannot transfer digitally and then have it activated by a camera specialist. You should inquire about this option before buying one.

## DV export settings



### **PAL/NTSC:**

The PAL format is used in Europe, and the US and Japan use NTSC. This option usually does not require changing.

**Render changed parts...:** Non-edited original files are simply copied into a completed DV [AVI](#). Normally, you have to decompress the DV data, add the set effects calculations, and recompress it. If no effects processing is pending, then these steps may not be necessary. This option can be permanently activated.

### **Use references to original material...:**

Unedited original files are exported directly to the device. Effects are rendered in real time. Use this option for finished movies without edits and effects, since real-time effects processing of DV data causes high processor loads that often result in output errors.

**Transfer DV back to device after export...:** Deactivate this option if you are only rendering your [movie](#) but do not want to export it. You can export your movie later by clicking "Export own DV file" from the "Export" [dialog](#)

## Export to mobile devices

Most devices require certain format settings (file format, resolution, bit rate, picture repeat rate, etc.) to be able to play a video.

The [menu](#)

is divided into various device classes (mobile phones, organizers and PDAs, games consoles, and video players) to make it easier to select your device. The last three selections are saved as favorites in the top part of the device list if you have more than one device or want to present your movies to your friends.

If your device is listed here, you won't have to worry about the format settings, because the necessary settings of the [export dialog](#) are automatically customized to the target device. Simply select your device, and then click the "OK" [button](#)

- that's all.



## Transfer with Bluetooth

**Warning!** The procedure described here refers to Windows XP with Service Pack 2!

Dialogs may be different depending on the Bluetooth driver and operating system version, or their order may vary (e.g. for password allocation) when transferring to your mobile phone. However, the process is usually similar if other drivers are used. Read more on this in the help file or the corresponding chapters of your operating system's manual and Bluetooth adapter.

- If you own a Bluetooth device, you can export the [movie](#) straight to your device. To do so, your device and your PC must both have Bluetooth interfaces. If your system has a Bluetooth device, you can activate the **"Transfer via Bluetooth"** option.
- After converting the movie into the desired format, the **Bluetooth file transfer assistant** opens.
- The first time you try to transfer files to your device via Bluetooth, you have to specify your device as the receiver in the [dialog](#) by clicking on **"Search..."**, selecting your device and then pressing "OK". The name of your device in the Bluetooth network is specified in the Bluetooth settings of the device. Check your device manual for this. Select your device and confirm your choice by pressing "OK".
- Now enter a password of your choice, which you will later have to confirm on your device and click on the "Continue" [button](#) in the assistant. Since connections between multiple Bluetooth devices can be set up simultaneously in a room, the password serves to identify certain connections as well as to safeguard your data.

The order may be the other way around, depending on the Bluetooth device driver, i.e. the mobile phone will request a password which must be confirmed on your PC. It's important that you use the same password in each case.

- You may be asked once again to enter the file name and path of the movie. In this case, we recommend using a folder that you will be able to find again quickly to export the file (e.g. "...My Files/My Videos").
- Click the "Scan..." [button](#), open the set up folder, and select your video file by double clicking it. Now, in the wizard, click the "Continue" button.
- Next, you may have to activate the reception of files on the device and re-enter the password. Afterwards, the transfer of the videos will begin automatically.
- Once the transfer has been completed successfully, "1 new message" will display on your device. Read more on how to save and play videos in the corresponding device manual.

### **Warning!**

We only recommend activating data reception via Bluetooth on your device once this function is actually required, e.g. for transferring files. Once you have completed the uploading process, you should deactivate Bluetooth again, since permanently activated Bluetooth reception constitutes a security risk!

## Transfer via infrared

For devices with infrared interfaces, the transmission of movies works similarly to using the Bluetooth transfer method. To do this, your PC and your device have to have infrared interfaces. Many notebooks are already fitted with such IrDA interfaces.

- Before starting the export, an infrared connection must already be established between the computer and the device. Activate the infrared interface on your device and establish the connection to your computer. You can check if a connection has been established via a corresponding symbol in the task bar. More information on this can be found in the Windows help under the keyword "Wireless connection".
- **Note:** *Some devices deactivate the infrared interface when no data is exchanged after a certain amount of time. In this case, you can search for the exported [movie](#) in the Media Pool again, reactivate the infrared interface of your device, open the [context menu](#) of the file, and then send the video to your device again by clicking "Transfer".*
- Open the "Export" [dialog](#) via the export [button](#), and under "Play after export", select the option "Export with infrared". Confirm with "OK". A window will now be displayed which informs you of the current status of the transmission.
- Once the transfer has been completed successfully, "1 new message" will display on your device. Read more on how to save and play videos in the corresponding device manual.

**My device is not in the list, what should I do?**

## Update devices online

The assortment of playback devices is constantly changing. Every day, new devices or versions are coming onto the market. The list of supported devices may therefore not be up-to-date and may not (yet) contain your specific device. MAGIX continuously maintains updated preset lists for the available devices, and these can be downloaded by pressing the update [button](#)

. Internet access is necessary.

The command "Download presets for new device" in the "Help" [menu](#) opens a website containing an up-to-date list of all supported devices and device versions. Just search for the desired device and click the corresponding link. The settings for the device will be downloaded and made available to you in MAGIX [Movie](#)

Edit Pro 16.

### **Warning**

: Some browsers display a warning if you try to download an executable file (.exe). You can ignore this warning.

If your device is not listed on the website, you can report your unsupported device so that it will be included in later updates.

## User-defined:

If your device does not appear in the list after the online update, you can set up the export settings manually. No need to worry though; you only have to do it once, since these settings can be saved as a preset.

Read the **instruction manual of your mobile device**

to find out which file format is required for this. If your device supports multiple formats, then you can experiment with the formats to get the best results.

Specify the file format by opening the target device's [menu](#) and selecting "**User-defined -> Video -> ...Format**". If you then click on "Export", you arrive at the [Export dialog](#) of the selected file format where you can set all the advanced settings.

**For details on these settings, please consult your device manual.** Explanations for the file format's settings can be found in the **Overview of the device classes** chapter, for the special settings of the export dialogs see "[Export movie](#)" in the "File menu" chapter.

### Tip:

If the format settings for your device are not accessible, then you can try out a different device from the same manufacturer and, using it as a template, make adjustments accordingly.



If you find settings you like, we recommend saving these as a preset for further use.

## Overview of the device classes

This chapter explains the various supported device classes and which peculiarities should be noted when manually setting the export format.

### Quick overview of the device types\*

**Example devices** [MPEG-4 profiles](#) ([audio](#) + video formats within MPEG-4 container format)

iPod & PSP      AVC (video) + AAC (audio)

Mobile phones      3GP (video) + AMR or AAC (audio)

#### **Additional video formats**

Symbian mobile phones      MPEG-4

Video players      DivX / XviD

PDAs, PocketPCs      WMV9

\*No guarantee taken for correctness of information

## Mobile phones

This refers to multimedia mobile phones and SmartPhones.

**File format:** For SmartPhones running the Symbian operating system, you should ideally use the Real format for maximum compatibility, since RealPlayer is integrated into the system. Many mobile phones also play [MPEG](#)

-4. It's important in this case that the correct container format (for mobile phones, usually 3GPP) is set up ("Video as MPEG-4 video export")

### Resolution

: The resolution corresponds to the display size of your mobile phone in pixels. Standard resolutions are 128 x 96 pixels (sub QCIF), 176 x 144 pixels (QCIF), 300 x 180 pixels, and 320 x 240 pixels (SmartPhones). You can find out the resolution of your mobile phone from its documentation. Many mobile phones require the precise setting in order to play back videos. If the aspect ratio does not correspond to the display resolution (300 x 180 corresponds to 5:3 instead of 4:3), then black bars are added. For broad displays (optimized for 16:9) we recommend the video effects Aspect ratio 16:9 (anamorph/letterbox).

### Frame rate

: Picture repeat rate, i. e. the number of frames per second (fps). For mobile phones this is usually reduced from 25fps to around 10 or 15fps in order to save memory space and because mobile phone processors are not powerful enough. If you don't have to save on memory, select the largest frame rate possible (see device manual) because at low frame rates the video can be very jerky.

## **Organizers and PDAs**

Under "Organizers and PDAs", Pocket PCs and similar devices are listed.

### **File format**

: For Pocket PCs, you should ideally use Windows Media Video format for maximum compatibility, since it usually only runs on modified Windows Operating Systems (Windows Mobile), and the Windows Media Player is integrated in the operating system.

**Resolution:** The resolution corresponds to the display size of the PDA, mostly 320 x 240 pixels. You can find out the resolution of your PDA from its documentation. A PDA can also play back at higher resolutions than those set; mostly, however, the [CPU](#) is usually not able to handle this as it must scale the picture before output, which can cause errors.

**Frame rate:** Picture repeat rate, i. e. the number of frames per second (fps). If you don't have to save on memory, use the largest [frame](#) rate possible (see device manual) because at low frame rates the video can be very jerky.



## **Games consoles**

Some portable games consoles (Sony PSP, Nintendo Wii) can also play videos. The consoles are extremely particular with regard to file format settings, and they sometimes use their own file format variations.

### **Warning**

: Do not change the presets!

MAGIX tries to supply presets for all games consoles with video functions on the market, but you may have to update your device list.

**Warning:** Sony PSP and Apple iPod video only play movies when they are copied with a specific name into a pre-defined target folder. Always copy movies for these devices from the export [dialog](#) along with the corresponding presets (at the top of the "Preset" list and at the bottom beside "Play after export").

## Video players

Video players are considered to be video devices if they have been developed especially for mobile video playback. They usually have relatively large displays and their own [hard disk](#) or a very large flash card memory (in GB).

File format: Mostly DivX [AVI](#) or [WMV](#) (Windows Media Video) are used. While WMV is its own format, AVI is a so-called container format. This means that the actual file format is set via the medium's [codec](#).

In addition to the AVI format, you will also have to set up a codec that your mobile device supports when exporting AVI files.

A much-used codec for AVI is the DivX codec. This is supported by a large number of portable video players. Specific standards have been set up between the codec manufacturer DivX and the device manufacturers (profiles) that a certified DivX device has to fulfill.

Unlike Windows Media or MPEG4, a separate [audio](#) codec (ACM codec) is required for the sound in order to encode the sound track in the same high compression at acceptable quality. Select the codec you wish to use for the sound under **Audio compression**. [MP3](#)

56kBps is used as a preset. For improved sound quality, you should read your device manual to find out which sound formats AVI audio still supports and, if required, install further ACM codecs from the Internet.

The DivX codec can be downloaded from [www.divx.com](http://www.divx.com).

### **Resolution**

: Video players can handle almost every resolution up to TV resolution (720x576), as most models can display your video picture in TV resolution via an analog TV output. For the optimum picture quality on the device display (if you do not wish to use the TV output) use the resolution that the device can display.

### **Frame rate**

: Picture repeat rate, i. e. the number of frames per second (fps). This isn't problematic, since the frame rate of the output material is used.

**Warning:** Sony PSP and Apple iPod video only play movies when they are copied with a specific name into a pre-defined target folder. Always copy movies for these devices from the export [dialog](#) along with the corresponding presets (at the top of the "Preset" list and at the bottom beside "Play after export").

# Burn discs



Switch to the "Burn" screen first by pressing the [button](#) indicated.

You can burn your movies (including a selection [menu](#)) onto CD, DVD, Blu-ray Disc, or upload them to MAGIX Online Album. All movies loaded into the [project](#) are taken into account. If you want to take out some of the movies that are loaded, then you will have to switch back to the "Edit" screen and delete some of them from the project. To do so, switch to the corresponding [movie](#), open the "File" menu and select "[Manage movies](#) -> [Remove movie](#)"

## Note

: At a screen resolution of 1280 x 1024, the program display changes. This makes the program more manageable and easier to use. The work steps remain the same despite the different display.

In this chapter

[Preview and editing](#)

[Menu](#)

[Templates](#)

[Edit disc menu](#)

[Burn dialog for DVD player](#)

[Create PC show](#)

[Create webDVD](#)

# Preview and editing

MAGIX [Movie](#) Edit Pro 16 provides two different modes for designing and previewing the disc [menu](#)



The preview mode is mainly intended to behave like a DVD player or Blu-ray player for checking the disc menu under realistic conditions. Only templates may be used; more detailed editing of the disc menu is not possible at this time.



During editing, you may adjust many features of the disc menu. There are many templates available for this that may be changed flexibly once loaded.

## Remote control

The virtual remote control is an important helper when it comes to checking how the disc will perform later.

When you later insert the CD or DVD with your [disc project](#) into your player, this remote control will control the preview picture just like a "real" remote control controls the picture on a monitor or TV. The DVD [menu](#) navigation can now be initiated with the arrow keys or the "OK" [button](#)

. Activated buttons are highlighted.



The **number keys** select the corresponding entry on the menu page. All menu entries are marked with a corresponding number. Within a chapter menu, playback is started from the particular [scene](#)

. In the [movie](#) menu, the corresponding chapter menu (if available) is changed or movie playback is started.

### Navigation keys:

These help you move from one section to the next in the menu of the CD/DVD being burned. You can switch between individual entries and confirm the switch by pressing "OK". The remote control works just like the remote control for your home DVD player.

### Skip/Move forward/back

: This allows you to skip to the next or previous scene while playing back your movie. In the menu, you can skip forward or back from one menu page to another.

**Play:** Starts the first entry in the menu. In case both the scene menus and chapter menus are available (see menu mode), the scene menu will be displayed first. Press the play [button](#) again to start playback at the beginning of the first scene of the first chapter.

Pressing **stop** halts playback.

### Disc

switches to the first page of the film menu.

**Sub** switches into the chapter [menu](#) (if available) of the currently selected film.

# Menu

MAGIX [Movie](#) Edit Pro 16 can add graphical selection menus to your movies. The [menu](#) is also burned to CD/DVD and appears when inserted into your player. Just like with a purchased DVD, you can easily select your movies with the help of preview pictures, or access particular chapters within a movie.

This sort of menu is available for the following [disc types](#)

:

- Blu-ray Disc
- DVD
- Mini DVD
- [Super Video CD \(SVCD\)](#)
- Video CD (VCD)
- [WMV](#) HD disc (Plus version only)
- [AVCHD](#) disc (Plus version only)
- Multi disc (Plus version only)

VCD, SVCD, and AVCHD disc are only possible as static menus.

# Templates

Below the preview monitor and the editing elements you will find templates for DVD menus and layouts.



To the left you will find a tree structure that makes it easier to select the template type. Now you can select using two buttons in the tree structure, whether you want to select templates in the "16:9" or the "4:3" (default) format. Every [menu](#) template is high resolution. Under "4:3" the following are available:

- **Animated DVD:** These templates contain background and introductory videos as well as music. The control elements are displayed in various states. The templates can only be used for mini DVDs and DVDs. If you burn a VCD or SVCD, still pictures and control elements will be shown, but music will not be audible.
- **Static (DVD, VCD, SVCD):** Here you will find templates equally suitable for use with DVDs and SVCDs. They consist of normal background pictures and tools
- **Unique:** These templates adjust to your [disc project](#), i.e. the videos and scenes you use are integrated directly into the menu.
- **TV showtime DVD:** With these templates your pictures will not be displayed in the [movie](#) menu as small preview pictures, but rather as fullscreen preview pictures for every menu page. With the "Skip" [button](#) on your remote control you can present the chapters with the help of the preview pictures, like in a slideshow ? with the option of being able to start the movie at any time from the current preview picture. These templates are intended for DVDs.

## Note:

For these menus the "Movie and chapter menu" mode in the menu design must remain active.

- **HD (DVD, [WMV HD](#)):** These templates contain super-sharp, high-res background images that are particularly noticeable on HD TV devices.

Under 16:9 additionally:

- **HD animated (DVD, [WMV, HD, mini HD DVD](#)):** These templates contain super-sharp, high-res background images that are particularly noticeable on HD TV devices and are additionally animated.

If you selected a specific type of menu template, you can use the horizontal scroll bar to view all the templates. There are lots of options when using the templates:

- If you wish to apply a template to all menu pages, click on "**Complete**" in the template bar and double-click on the template of your choice. The complete template will then be applied.
- You can also combine the various elements of the individual templates. If, for example, you wish to combine the text format of a template with the background of another one, first double-click on the template with the text of your choice. Then click on the tab "Text". There you can select the desired template for the text.



You can load the template (or individual template elements) for the current menu (movie or chapter) as well as for all menus.

**Note:** Some menu templates include [intro](#)

videos with a smooth transition to the menu page!

# Edit disc menu

The preview pictures and the [menu](#) title can be moved freely in the preview monitor. The menu may be edited very flexibly.



Activate the "Edit" [button](#) to do this.

In this section:

[Load on-disc editing project from disc](#)

[Edit menu elements](#)

[Navigation](#)

[Disc options](#)

[Design page](#)

[Design button](#)

[Menu entry properties](#)

[OnDisc Editing](#)

[Burning assistant](#)

[Memory](#)



## Load on-disc editing project from disc



Use this [button](#) to load the DVD-/RW in your drive for on-disc editing. For more information on this, consult the [On-disc editing](#) section.

## Edit menu elements

Hold down the left mouse key and drag text boxes or graphical elements to the desired position. You can adjust the size by dragging out the corners and edges of the [frame](#)

During [project](#)

editing, you can undo the last changes you made. This way it's no problem if you want to experiment with critical operations. If you don't like the results, then you can always revert to the previous state by using "Undo".

Keyboard shortcut: Ctrl + Z

The "Redo" function undoes the previous "Undo" function.

Keyboard shortcut: Ctrl + Y



**Set ratio:** Avoid distortions by using this [button](#) to set the page proportions of the [menu](#) elements.

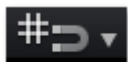


### Group

: Menu elements, including the description text and number, can be moved or scaled in size.

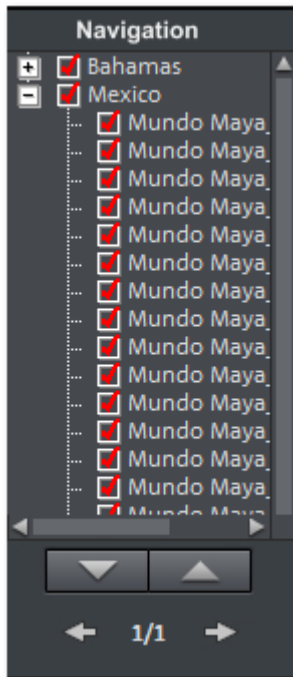


**Fade in TV display area in the preview monitor:** This option displays the [image borders of the television](#) as lines in the preview monitor.



**Grid:** You can precisely align the frame positions with one another using the grid [button](#). A [dialog](#) can be opened to set the grid more exactly using the small arrow next to the button.

# Navigation



- All movies are listed as first entries. The corresponding [menu](#) level is the **film menu**.
- All scenes are listed as second entries to the right. The corresponding menu level is the **chapter menu**.

Removing the red check deactivates the corresponding entry in the photo menu. The scenes are shown of course, but they are not selectable directly in the menu.

- If you click a film entry, then the film menu will open in the preview.
- If you click one of the chapters listed, then the chapter menu will open in the preview.

## Disc options

You may deactivate the menus entirely or customize them here.

**Intro video:** You can use this [button](#) to load videos to be used as introductions to your DVD or mini DVD. The \*.[avi](#), \*.mpg, \*.[mxv](#), \*.vob formats are supported. The [intro](#) is played immediately after the DVD has been inserted into the player. The DVD [menu](#) will then appear.

### Menu intro

You can use this [button](#) to load videos into the preview monitor to be used as introductions to your DVD or miniDVD. The following formats are supported: ".\*[avi](#)", ".\*.mpg", ".\*[mxv](#)", ".\*.vob". The [intro](#) is played immediately after the DVD has been inserted into the player. The DVD [menu](#) will then appear.

## Film menu & chapter menu

The disc [menu](#)

essentially consists of two layers:

**Film menu:** The upper layer includes the film menu, which is only used if a [project](#) contains multiple movies.

**Chapter menu:** This is the lowest layer of the disc menu, which assumes the chapter markers in a [movie](#) as menu entries. More information about this is available in "[Chapter markers](#)".

### Note

: A chapter menu cannot contain more than 99 entries. If your movie has more chapters, then you can either burn it without a chapter menu or split it into multiple parts.

## Note on SVCD compatibility

Some DVD players may have difficulty playing created SVCDs (despite fault-free burning) if the disc contains a [project](#)

burned in "Chapter and photo menus" mode and contains several slideshows and/or a large number of photos. These compatibility problems can be avoided by:

- Using [menu](#) mode 1 or 2 for SVCD,
- Only adding a single [movie](#) to the disc, or
- Turning off the PBC (playback control) function, i. e. the [menu](#) navigation of the DVD player.

**Preview pictures:** Shows/hides the preview pictures in the disc [menu](#)

### Numbering:

The numbers beside the menu entries can be selected directly using the remote control, but they might be disturbing sometimes. Use this option to show/hide them.

### Frame:

A frame borders the preview pictures. If you think it gets in the way, then you can easily remove it using this option.

**In the Arranger:** Clicking this [button](#) opens the Arranger to edit animated menus.

## Create your own menu background



Every [menu](#) background can be created new from scratch or edited.

A click on this [button](#)

switches to the "Edit" interface and loads the selected menu background as video. Here you can change and design the background as you please. The created film must be saved and then applied as a menu background.

**Tip:** If you would like to design a [menu](#)

background yourself from scratch, first press Ctrl + A to select all objects, and then Del, to delete them.

## Design page

**Background graphic:** You have three options in this case. You can either set a certain "color value" for the background. Or, you can select an [image](#) file from your hard drive. You can also select a certain [frame](#) from a video in your [project](#)

### Plus version only!

New [menu](#)

pages may also be added or irrelevant pages may be removed.



Adds a new menu page.



Removes the selected menu page.

## Design button

MAGIX [Movie](#) Edit Pro 16 enables simple editing of any [menu](#) entry. They will appear in the disc [menu](#) as buttons with preview images.

### Plus version only!

New [menu](#) entries may also be added or irrelevant pages may be removed.



Adds a new menu entry.



Removes the selected menu entry.

**Tip:** If you would simply like to deactivate unused [menu](#) entries, this may be done via the navigation.

**Note:** The chapter [menu](#) is formed via [chapter markers](#) and can be influenced in detail with these.



Pressing this [button](#) or double-clicking the menu entries allows menu entries you have created to be edited. The [dialog](#) with the [properties of the menu entries](#) will open.



### Edit in MAGIX Xtreme Photo

**Designer:** These buttons open MAGIX Xtreme Photo Designer for further editing of your background pictures or the selected [menu](#) elements.

## Jump to linked page



To test the targets of [menu](#) entries, select the desired menu entry and click the [button](#)

## Menu entry properties

Double-clicking the preview picture or a [menu](#) entry opens an editor for you to adjust the preview picture or menu entry.

### Menu entry

: Specify the menu page that should be opened when this menu entry is selected.

### Preview image

: Select a suitable preview picture here.

## Menu text

In the text input [field](#), you can enter any text to match the chosen [menu](#) entry.



Set the vertical direction of the text (upwards, centered or downward).



Set the horizontal direction of the text (left, centered or right).

### Font size:

Set the height of the text in pixels.

### Font color:

Define the foreground color of the text.

### Font:

Set which font and which style (bold, italic, etc.) should be used.

### Shadow:

Set the color and size of the shadow that will appear underneath the text.

### 3D effect:

If you would like to make your text appear three-dimensional, you can set the width, height, and color of the 3D effect.

**Apply to all:** Except for the text, all settings are applied to all entries in the current [menu](#).

## Menu image

**Use [frame from movie](#):** Use the [fader](#) to set which frame should be used in the video as a preview picture. The numerical input fields are sorted as follows: Hours:Minutes:Seconds:Frames.

**Use different graphic:** You can also load your own bitmap images to be used as [menu](#) pictures.

**Hint:** It may be the case that there are no [menu](#) pictures in some menu templates, so changing the [menu](#) picture won't have any noticeable effect.

## Actions at the end of the movie (only in the film menu)

You can enter which action should be carried out once the film has finished playing. You have the choice of:

- Stop playback
- Jumping to the video [menu](#) or photo menu
- Jump to chapter menu
- Jump to next [movie](#)



- Play film as an endless loop

### **Edit your own menu entries**

There is another view in this [dialog](#) to edit [menu](#) entries you have created. Menu links can be edited here. This makes it possible to link a menu entry with a certain action, menu page, or a certain position in the [movie](#)

#### **No link**

: The menu element cannot be selected and has no function other than to display menu text.

#### **Link to page in current menu**

: Jumps to a menu page in the current movie or chapter menu in the current film.

#### **Link to another menu**

: Opens another movie or chapter menu.

#### **Link to chapter in a movie**

: If this option is selected, enter a film and chapter marker where playback should start.

#### **Note**

: For DVDs, only chapters within the current movie may be jumped to.

#### **Link to film start:** The [movie](#)

will play back from the start.

## OnDisc Editing

OnDisc editing lets you burn more movies onto disc at a later stage and customize the [menu](#) accordingly. It's also possible to just rework the menu.

In order to use OnDisc editing, the "Prepare disc for OnDisc editing" option has to be activated. You can find this option in the [Burn options](#) of the "Burn" [dialog](#)



To put a [movie](#) onto DVD, first load the movie and then switch to the "Burn" screen. Insert your DVD+/-RW and press "**Load project**".

MAGIX Movie Edit Pro 16 will ask you if you wish to add the loaded movies to the disc. If you answer "Yes", the entries will be added to the existing menu.

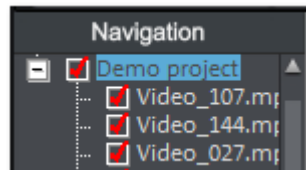
It is **not**

possible to edit movies you have already burned onto disc later in the "Burn" window (to do this, please use the "Restore backup" function). You can only change the menu.

In addition to normal menu design possibilities (see [Burn](#) window) you can hide entire movies in OnDisc editing mode, e.g. to replace them with an entirely reworked version.

Select a movie in the navigation structure and press the "**Del**" key.

To display the movie again, press "**Shift + Del**"



**Important:** Deleting certain parts of your DVD-/RW is not possible. Every new version of the menu will be burned additionally to the disc. Accordingly, the remaining disc space decreases the more changes you make. Deleting movies from your DVD is also not possible. When you remove a movie from the menu, it will still be played, providing "Actions at the end of the movie" is set up accordingly (see "[Menu entry properties](#)"

in the "Burn" interface).

With "Burn disc" you can create your "new" disc. Only the new movies and the adjusted [menu](#) will be encoded and burned to disc.

## Burning assistant

Click "Burn" to open the screen where you create DVDs, Blu-ray Discs, or another video medium, including a [menu](#)



Here you can select the type of disc you would like to create. Under "More options" additional disc options are available to you which aren't used as frequently.

Note: For each disc format there are different limitations. For example, with many formats animated menus are not possible or no menus and transitions at all are possible. You can find an overview of these limitations in the PDF manual or in "Help" under "Appendix: [Digital videos and storage media](#)".

## Memory

VCD (approx. 700 MB)	approx. 70 minutes
SVCD (approx. 700 MB)	approx. 30 - 40 minutes
DVD (approx. 4.7 GB)	approx. 2 hours
Mini-DVD (approx. 700 MB)	approx. 20 minutes
Blu-ray Disc (approx. 25 GB/single-layer or 50 GB/dual-layer)	approx. 4.5 hours

Especially with the [MPEG](#)

-2 encoder which is used for SVCDs, DVDs, and mini-DVDs (i.e. on CD-ROMs written in DVD file format), it can be difficult to supply reliable information relating to the required memory. If the "Variable bit rate" of the MPEG-2 encoder is activated, encoding will occur according to the movements in the picture. The required memory depends on the film material; an action film would need more memory than a drama, for instance.

If you cannot save your [disc project](#) on a blank CD, you will have to divide it up into different sections.

A [movie](#)

, for example, can be burned onto 3 SVCDs by creating three different projects: Start, middle, and end are added and burned sequentially.

Further information on MPEG compression and formats can be found in the chapter "[Video and data formats](#)

" of the PDF manual.

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" of the PDF manual.

## Test series with variable encoder settings

If you would like to know how much memory you will require for various encoder settings, then you should run some simulations before burning.

To avoid wasting blank CDs while testing, you should activate the "Simulate first" option.

Then create, for example, a short (ca. 5 min.) [disc project](#) and simulate burning in multiple cycles with various settings.

After every simulation you can access the [MPEG-1](#) or [MPEG-2](#) file on the [hard disk](#) to check how large the file has become.

You will discover how much disc space your [disc project](#) will require from the simulation results. The memory requirements of a 5-minute disc project would have to be multiplied by 20 in order to estimate the space required for a 100-minute [movie](#). You should also add buffer for the [selection menu](#).

## Separate project onto multiple discs

**Automatically:** If the [disc project](#) requires more memory than is available on the CD or DVD, a [dialog](#) will appear before burning asking whether the [disc project](#) should be automatically segmented for multiple discs. Confirm this by clicking "Yes". The disc project will then be automatically divided into individual disc projects and burned sequentially onto multiple discs. This is the easiest method since everything is automatic, and all you have to do is insert a new blank CD when required.

### Manual

#### Case 1:

If several movies do not fit onto a single disc...

In this case, switch back to the "Record" screen and delete as many movies as is needed until the remaining movies fit onto the disc. You can create a new disc project and load and burn the other movies afterwards.

#### Case 2:

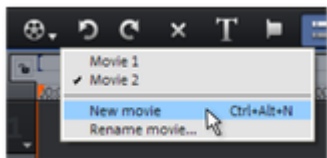
When a long film doesn't fit onto a disc...

In this case, the [movie](#)

has to be split into two or more parts that will be burned separately onto disc.

- Switch back to the "Edit" view and place the start marker to the position at which you wish to divide the movie. In the "Edit" [menu](#), select "Cut -> Separate movie".

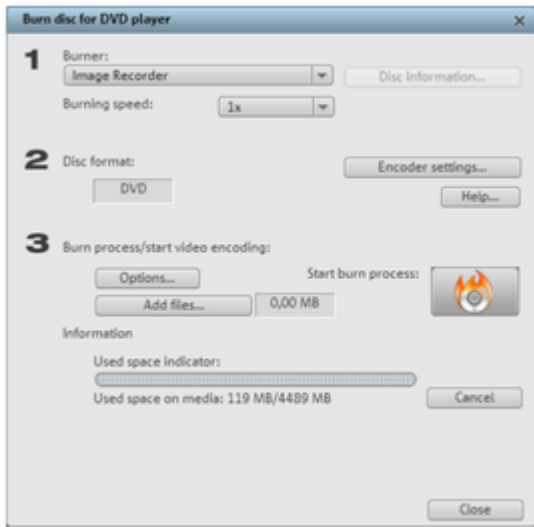
•



- All passages behind the start marker will be removed from the movie and made into a smaller movie. Both movies can be moved using the "Select to edit" menu in the arranger. Save both of them separately to your [hard disk](#) ("Save movie" menu option, for example, as "Part 1" and "Part 2").
- Remove one of the two movies (for example, "Part 2") from the disc project ("Manage movies -> [Remove movie](#)" menu option).
- Switch to the "Burn" interface and burn the first film ("Part 1") to CD or DVD.
- Create a new disc project ("New" [button](#)), switch to the "Record" view and load it into the second film ("Part 2").
- Switch to the "Burn" interface and burn the second [movie](#) to CD or DVD.

# Burn dialog for DVD player

Select your burner, the type of disc, the encoder settings, etc. For video CDs this is [MPEG-1](#); for Mini DVDs, Super Video CDs and DVD, use MPEG-2. Blu-ray Disc uses MPEG-2, and higher bit rates are applied in order to reach the higher HD resolutions.



## Steps for burning DVDs, etc.

1. **Set up burner and burn speed:** If you have multiple burners installed, you can select which device you wish to use in this [menu](#).
2. **Encoder settings:** Use the "Encoder" [button](#) to access the selection [dialog](#) where you can specify the properties of the [MPEG](#) encoder (memory requirements, quality and duration of the MPEG conversion).
2. The "Advanced" [button](#) opens the "Advanced settings" dialog. Here you can adjust all the fine settings of the MPEG encoder.

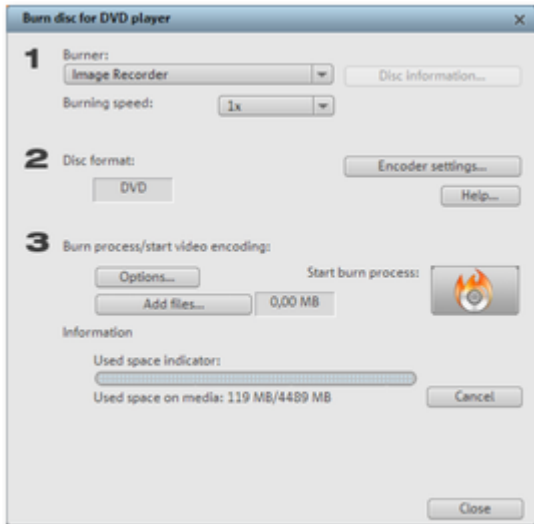
**Burning disc/starting video encoding: "Burn disc":** This starts the disc burning process. Every time you burn and every time a simulation is carried out, the [disc project](#) is encoded (for VCDs with MPEG-1, with SVCD, DVD and mini-DVD with [MPEG-2](#)). You have the option of choosing a [storage location](#) for the MPEG file on the [hard disk](#). Please note that the MPEG file is not deleted from the hard disk after the burn process has finished. Depending on the length of the [project](#), encoding and burning may take some time. The time required can be seen in the [dialog](#)

## Creating an ISO image

The simplest way to create an ISO [image](#) is to select "Image recorder" under "Burner". When starting the "Burning process", you have to specify a name for the [image](#) file you wish to create.

# Burn dialog for DVD player

Select your burner, the type of disc, the encoder settings, etc. For video CDs this is [MPEG-1](#); for Mini DVDs, Super Video CDs and DVD, use MPEG-2. Blu-ray Disc uses MPEG-2, and higher bit rates are applied in order to reach the higher HD resolutions.



## Steps for burning DVDs, etc.

1. **Set up burner and burn speed:** If you have multiple burners installed, you can select which device you wish to use in this [menu](#).
2. **Encoder settings:** Use the "Encoder" [button](#) to access the selection [dialog](#) where you can specify the properties of the [MPEG](#) encoder (memory requirements, quality and duration of the MPEG conversion).
2. The "Advanced" [button](#) opens the "Advanced settings" dialog. Here you can adjust all the fine settings of the MPEG encoder.

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The simplest way to create an ISO [image](#) is to select "Image recorder" under "Burner". When starting the "Burning process", you have to specify a name for the [image](#) file you wish to create.

## Options

### **Simulate first:**

If you are not sure about the write speed or memory requirements of the selected disc, you can simulate the write process before burning.

### **Add [project backup](#):**

Use this option to add additional project data to the CD/DVD together with the selected video format. You can then load the disc project from the finished disc to re-edit it and create a changed version.

### **Activate buffer underrun protection:**

Many burners support techniques that prevent "buffer underrun". Use this option to activate this protective feature and burn your files at higher speeds (without risking making a coaster out of your blank disc).

### **Completely format DVD/CD-RW media:**

This option reformats the RW media and deletes all existing file material.

**Prepare disc for OnDisc editing:** With a DVD±RW, it is possible to add more slideshows to the disc, or to edit the [menu](#) at a later date. The disc has to be burned with the option "[Prepare disc for OnDisc editing](#)" activated.

### **Shutdown computer after burning:**

Activate this option to automatically turn off the computer after encoding and burning has been completed. You could, for instance, start the encoding and burning process in the evening, and then you don't have to wait for the process to finish to switch off your computer.

### **Activate the burner's defect management option:**

If a certain section of the disc is defective, then this will be recognized by the burner and labeled as such. No content will be saved there as a result.

**Burn standard video DVD onto same disc:** On a [WMV](#)

HD disc you can use this option burn an additional normal DVD video onto disc. This ensures that your discs can also be played back on standalone DVD players. See Multi disc.

**CD/DVD title:** This is the title of the DVD as displayed as disc name on the PC. The [disc project](#) name is displayed here by default.



# Encoder settings



Use the "Encoder" [button](#) to access the selection [dialog](#) where you can specify the properties of the [MPEG](#) encoder (memory requirements, quality, and duration of the MPEG conversion).

### Preset:

Additional settings for the selected disc type.

**Longplay video DVD** DVD with extra-long play time. The bit rate is reduced, causing a compromise in quality.

**Longplay music DVD** DVD with extra-long play time for music. The bit rate for the soundtrack remains at the highest quality level.

**Standard DVD** Normal DVD

**Widescreen DVD** Normal DVD in 16:9 widescreen format

**Bit rate:** The bit rate determines the memory requirement of the completed video. The higher the bit rate, the larger the file, and the shorter the maximum play time of the [movie](#) that fits on a disc.

### Adjust bit rate:

The expected file size of the finished video is estimated, depending on the set bit rate. If the movie does not fit onto the disc, then the bit rate is corrected accordingly.

### Quality:

Determines the quality of the encoding process. The higher the quality, the better the finished video will look, but encoding will take considerably longer.

**Smart rendering:** Smart Rendering considerably reduces the encoding effort for MPEG files. During production of MPEG files, only those parts of the movie that were changed in the program (e.g. by video cleaning or effects) are re-encoded. Please note: The MPEG files contained in the movie **must have the same format**, i.e. the bit rates (variable or constant), [audio](#) formats, [image](#) resolutions, and video formats must match.

### Anti-flicker filter:

This option should only be activated for playback on a TV screen to reduce line flickering.

To return to the standard settings please use the "**Reset**" [button](#)

The "Advanced" button opens the "Enhanced parameters" dialog. Here you can adjust all the fine settings of the MPEG encoder. Please also read the addendum [MPEG Encoder Settings](#)

# Create PC show



Click this [button](#)

and a presentation optimized for your PC will be created.

First, enter a path where the PC show will be found again later, and click "OK".

# Create webDVD



You can create an online presentation which can be uploaded to MAGIX Online Album and opened there. To do this, you must first register on MAGIX Online Album.

First, create and save the online presentation on your computer, and then it can be uploaded. Indicate a location to save the file. Usually the suggested folder does not need to be changed.

# Batch conversion

Batch conversion makes it possible to convert multiple video files, movies, objects, or whole projects into another format in just one step.

## Open batch conversion

Batch conversion can be opened using different presets. A pre-selection appears only if you have loaded a film or a [project](#)

The following scenarios exist:

- Batch conversion has been opened from the [context menu](#) in the [Media Pool](#): The file selected in the Media Pool beforehand will be transferred to the task list and can be converted to the available formats. In case of projects which contain multiple movies, all movies will appear as individual tasks.
- Only one empty [movie](#) is open: A [dialog](#) opens additionally for batch conversion, in which video files that have to be converted to other formats can be selected and loaded.
- A movie with video material and more than one object in the first track is opened. A dialog opens, in which you can select which tasks should be created for batch conversion.
  - **All scenes in the movie:** All objects present in the 1st track will be used as starting points for the video files to be exported. An application for this could be that all [scene](#) beginnings of a movie should be exported as bitmap files or a backup for a movie is to be created as individual scenes.
  - **Multiple movies:** The opened movie will be exported as a whole video. Additional movies can be added to the list in the dialog.
- Multiple movies with video material are open: The opened movie will be exported as a complete video. This is especially useful for large projects with a lot of individual movies, eliminating the need to export each one individually.

## Administration

Save and load your settings here. These include the list of files to be exported and the export settings and names of all entries.

**Caution!** Batch conversion references the projects, movies, and the objects contained therein directly. Keep in mind that when converting entire movies, the source material must also be available. During conversion of individual objects from movies, you have to make sure that the [movie](#) file has not been changed between loading and saving.

## Queued entries for batch conversion

This is the list of all objects that have to be converted into the indicated format. Each task can have its own export settings.

**Add files (not during conversion of individual objects from movies)**

: Manually add files, including video files and projects.

**Remove selected**

: The marked tasks will be removed from the list.

**Duplicate selected**

: If you would like to export tasks in multiple formats, you can simply mark and duplicate them and assign individual export settings to them.

# Format settings for the selected conversion process

These are settings for the currently selected tasks, and multiple tasks can be given a setting simultaneously. Select one or more tasks from the task list.

## Note on format setting for multiple tasks:

If one of the marked tasks already has an individual setting, its will be lost after another format is selected. To prevent this, remove the selection for each task using Ctrl + mouse-click.

Set the target format in the [flip menu](#). Windows Media Video format (\*.wmv) is the default.

**Advanced settings:** This opens the [dialog](#) for the advanced format settings. This corresponds to the dialog for normal video export of a [movie](#)

## Tip:

If you give several tasks the same file name, the files created will be documented intelligently. For example, you can easily convert and simultaneously line up multiple movies that belong together thematically.

# Shut down PC automatically after successful export

This option is especially useful when you export long movies and are using an especially high-quality and resource-demanding export format. You can leave the computer to work on the individual tasks and after finishing them it will turn itself off.

# Start batch conversion

Click on "Start conversion" to start the process. After ending conversion processes, a list of all export processes with a message informing of its success will appear.

**Hint:** During batch conversion, messages that appear during normal file import will be for the most part suppressed. This is to enable the smoothest conversion of all tasks. Therefore, please make sure that all files to be converted or the [project](#) can be easily loaded before starting a batch conversion.

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# Menus

Certain [menu](#)

items are not available on the "Record" and "Burn" screens. The menu reference describes the full menu as found on the "Edit" screen.

In this chapter

[File menu](#)

[Edit menu](#)

[Effects \(FX\)](#)

[Windows menu](#)

[Online menu](#)

[Tasks menu](#)

[Help menu](#)

# File menu

In this chapter

[New project](#)

[Load project](#)

[Save project](#)

[Save project as...](#)

[Manage movies](#)

[Export movie](#)

[Record audio / images / video](#)

[Import Audio CD track\(s\)](#)

[Scan image](#)

[Output audio/video](#)

[Burn CD/DVD](#)

[Internet](#)

[Backup copy](#)

[Load backup project](#)

[Clean-up wizard](#)

[Settings](#)

[Exit](#)

## New project



Creates a new MAGIX [Movie Edit Pro 16 project](#). A [dialog](#) with [settings for a new disc project or a new film](#) opens to get started.

Keyboard shortcut: Shift + N



## Load project



Use this option to load a [movie](#) into your [disc project](#). Please note that all media files associated with it must be accessible. MAGIX Movie Edit Pro 16 will search for all used sounds and video files in the folders in which they were located when the movie was saved.

Keyboard shortcut: Ctrl + O

## Save project



The current [disc project](#) is saved with the name displayed in the [project](#) window. If you have not yet specified a name for your project, a [dialog](#) will open asking you to do so.

Keyboard shortcut: Shift + S

## Save project as...

A [dialog](#)

opens where you can specify the path and name of the video for saving.

Keyboard shortcut: Shift + O

## **Manage movies**

## **New movie**

Use this option to create a new [movie](#) for your recordings and imported files. Since a film is normally already opened, you will have to decide whether the movie should be inserted into the existing [project](#) or if a new project should be created.

Keyboard shortcut: Ctrl + Alt + N

## **Delete movie**

This option lets you remove the current [movie](#) from the [project](#). However, it is still available on the hard drive and can be loaded again at any time.  
Shortcut: Shift + F4

## **Attach movie**

Using this function you can attach a [movie](#) to an opened one. This is then attached to the end of the movie and automatically takes on the original [movie](#)'s settings.

## **Rename movie**

You can enter a new name for your [movie](#) here.

## **Attach movie**

Using this function you can attach a [movie](#) to an opened one. This is then attached to the end of the movie and automatically takes on the original [movie](#)'s settings.

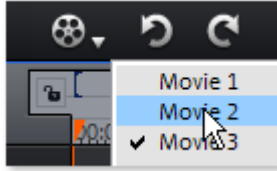
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## Import movie file

Use this option to load a [movie](#) into your [disc project](#)

. Please note that all media files associated with it must be accessible. MAGIX Movie Edit Pro 16 will search for all used sounds and video files in the folders in which they were located when the movie was saved.



The "Select movie for editing" [button](#) lets you switch between movies.



## **Export movie file**

A [dialog](#) will open in which a file name for the film to be exported has to be entered. The [movie](#) can then be imported again into other projects.

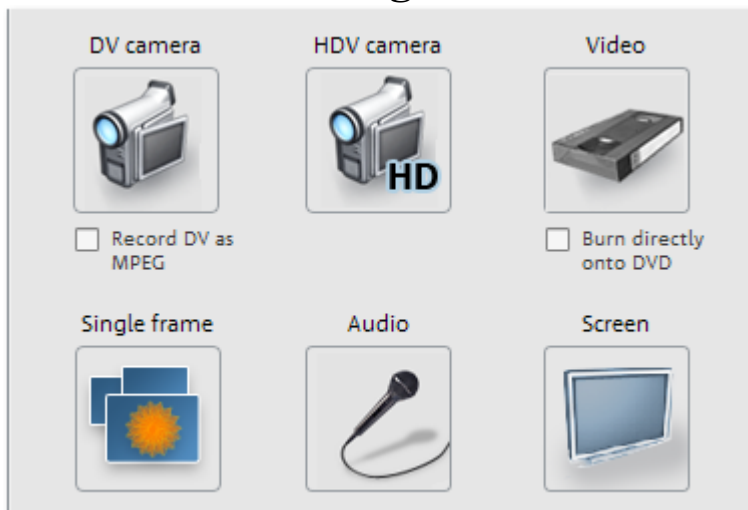
### **Note**

: The movie file (\*.mvd) contains all information about the used media files, cuts, effects, and titles, but not the picture and sound material itself. This is found in the recorded or imported media files that remain unchanged during the entire MAGIX Movie Edit Pro 16 editing process. To save the full movie into a dedicated directory, e.g. to continue editing on a different PC, please use the function "Copy movie and media into directory".

## **Export movie**

This provides all export formats supported by MAGIX [Movie](#) Edit Pro 16 that aren't covered by burning. Refer to "[Exporting](#)" for more information.

## Record audio / images / video



A selection window will open for you to select the desired recording type. You can also access it via the "Record" [button](#) in the transport control.

Keyboard shortcut: G

## Import Audio CD track(s)

You can simply import a CD track as a regular file from the Media Pool via drag & drop. If this simple method doesn't work for some reason, then you can use the [menu](#) command to open the CD manager to select tracks from an [audio](#) CD and load them into the arrangement. More about this can be found in the section ["Importing Audio CDs" in the Audio chapter](#)

.  
Keyboard shortcut: C

# Scan image

## Select scanner

The twain interface connects MAGIX [Movie](#) Edit Pro 16 with almost all current scanners or digital cameras. Proceed as follows if working with the twain interface for the first time:

1. Install the twain [software](#) for the device.
2. Restart your computer.
3. Start MAGIX Movie Edit Pro 16.
4. Click on "File -> Twain scanner -> Select source", if the scanner works with 32-bit software.
5. In the [dialog field](#) click on the device you want to work with. This step will no longer be necessary if you continue using the same device.

Keyboard shortcut: Alt + Q

## Start the scanning process

The scan window of your scan [software](#) will appear. Specify the resolution and color depth in this window. Once the scan process is finished, the twain software will normally switch off by itself? the scanned [image](#) file will be added to MAGIX [Movie](#) Edit Pro 16 automatically. If the twain [dialog](#) remains open, you will be able to scan multiple images in succession.

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## Output audio/video

This command opens the [dialog](#) for exporting the completed video or its [audio](#) track to analog or digital video recorders/camcorders or various mobile devices such as smartphones, PDAs, video players, or games consoles.

Please read the chapter "[Output audio/video](#)

".

Keyboard shortcut: H



## **Burn CD/DVD**

## **Manually compile files**

Opens the MAGIX Speed burnR burning application for burning movies or other files onto CD/DVD. The files are selected by simply dragging & dropping them into the MAGIX Speed burnR explorer. Further information can be found in the MAGIX Speed burnR [help](#) file.

Keyboard shortcut: Alt + Shift + R

## Copy CD/DVD direct

The [dialog](#)

provides several options for creating a copy:

- **Copy:** Here you can directly copy a non copy-protected CD or DVD.
- **Shrink:** Compresses a DVD to the size of a regular single layer DVD+/-R/RW. All files of the original DVD have to be on the hard drive.
- **Analog copy:** Copies your video onto a disc via analog recording.

More on this in the chapter about the "Record" dialog.

Keyboard shortcut: Alt + Shift + D

## **Burn an already created (S)VCD/Video DVD**

All necessary files, menus, and encoded video files needed to burn a CD/DVD will be temporarily stored on your hard drive. After your disc is burned, these are **not** automatically deleted. Using "[Disc image](#)

" multi-copy, you can use these images to burn as many discs as you would like without having to encode the files again.

In the [dialog](#), choose the image you want. All necessary files are then transferred to the MAGIX Speed burnR burning tool.

For more information on using MAGIX Speed burnR, read the program's help file.

## Internet

This is a list of [menu](#) entries regarding all of the services that are available directly from within MAGIX [Movie](#)

Edit Pro 16.

In this section:

[MAGIX Online Album/MAGIX Online Print Service/Catooh](#)

[Export to magix.info](#)

[Online login details](#)

[MAGIX Community](#)

## **MAGIX Online Album/MAGIX Online Print Service/Catoooh**

For MAGIX Online World please read [menu](#) item Online!

### **Export to magix.info**

This command allows you to export your [movie](#) to magix.info.

First, export your [project](#) in one of the following formats: asf, [mov](#), mpg, [mpeg](#), mp4, [wmv](#), 3gp, or [avi](#). Next, access "File -> Internet -> magix.info -> Present videos on magix.info" to reach a page where you can upload your video. You may need to register with magix.info.

## **Export to magix.info**

This command allows you to export your [movie](#) to magix.info.

First, export your [project](#) in one of the following formats: asf, [mov](#), mpg, [mpeg](#), mp4, [wmv](#), 3gp, or [avi](#). Next, access "File -> Internet -> magix.info -> Present videos on magix.info" to reach a page where you can upload your video. You may need to register with magix.info.

## **Online login details**

In this [dialog](#)

, you can save your login information (login and password) for MAGIX Online Album and all other MAGIX Online World as well as for Catooh, making it unnecessary to login each time you access MAGIX Online World.

The saved data are valid for all other MAGIX programs for the corresponding computer user.



## **MAGIX Community**

This is a direct connection between MAGIX and different communities like YouTube™ or Vimeo™

### **Upload current movie as video**

Uploads the current film to the selected portal or to the selected community. Enter the data for video into the fields provided, so that the search function for this portal can also find this video.

MAGIX [Movie](#) Edit Pro 16 partially uses the H.264 format for this, which is a component of the [MPEG-4](#) codec. Since Flash supports this format directly and most communities and portals use the format, the film does not need to be re-rendered on the corresponding server. This avoids loss of quality.

When HD material is uploaded, a resolution of [720p](#) is used for the HD format.

### **Upload all selected media in Media Pool**

Uploads the media selected in the Media Pool to the corresponding portal or the selective community.

**Note:** To import and export AVC and [MPEG-4](#) files, the MPEG-4 codec must first be [activated](#). A [dialog](#) will open if the codec is required. Files with a horizontal resolution of more than 768 pixels can only be loaded in MAGIX [Movie](#) Edit Pro 16 Plus.

## **Backup copy**

Files must be saved to be able to be easily retrieved in case of a hard drive crash or some other error. For detailed information, read the [Backup](#) section in the "[Video project management](#)" chapter.

## **Load backup project**

This option loads an automatically created slideshow backup. This type of automatic backup gets the file extension MV\_ (underscore). This command is only intended for use in emergencies, for example, if you unintentionally saved your change and wish to return to the previous version of the [movie](#)

.  
Keyboard shortcut: Alt + O

## Clean-up wizard

The clean-up wizard helps you delete projects from your hard drive, including all media files. Use this function to free up disk space for future projects.

### Caution

: If the files you used in the slideshow have also been used in other slideshows (like trailers, opening music, etc.), then you should make backup copies of these files beforehand.

Shortcut: Ctrl + Alt + G

For detailed information, read the [clean-up wizard](#) section in the "[Video project management](#)" chapter.

## Settings

In this section:

[Movie settings](#)

[Program settings](#)

[Edit Keyboard shortcut](#)

## **Movie settings**

Opens the [movie settings](#) of the currently selected [movie](#)

Keyboard shortcut: E

## Program settings



Opens the [program settings](#)

Keyboard shortcut: Y



## **Edit Keyboard shortcut**

This [menu](#) entry opens a [dialog for editing the keyboard shortcuts](#). This allows you to adjust MAGIX

[Movie](#)

Edit Pro 16 to your own specific needs.

## **Exit**

Closes MAGIX [Movie](#)

Edit Pro 16.

Keyboard shortcut: Alt + F4

# Edit menu

In this section:

[undo](#)

[Restore](#)

[Cut objects](#)

[Copying objects](#)

[Paste objects](#)

[Duplicate objects](#)

[Delete objects](#)

[Select all objects](#)

[Cut](#)

[Musical editing](#)

[Range](#)

[Form group](#)

[Ungroup objects](#)

[Wizards](#)

[Mixdown Audio](#)

[Audio and video mixdown](#)

[Edit snap point](#)

[Marker](#)

[Move screen view](#)

[Multicam](#)

## **undo**

During [project](#) editing, you can undo the last changes you made. This way it's no problem if you want to experiment with critical operations. If you don't like the results, then you can always revert to the previous state by using "Undo".

Keyboard shortcut: Ctrl + Z

## **Restore**

The "Redo" function undoes the previous "Undo" function.  
Keyboard shortcut: Ctrl + Y

## Cut objects



This function deletes the selected [scene](#) (or the selected object in "Timeline" mode) and copies it to the [clipboard](#). You can then use the "Paste" command to copy it into any [movie](#)

Keyboard shortcut: Ctrl + X

## Copying objects



This function copies the selected [scene](#) (or the selected object in Timeline mode) to the [clipboard](#). You can then use the "Paste" command to place it into any [movie](#)

Keyboard shortcut: Ctrl + C

## Paste objects



This command inserts the [clipboard](#) material (photo or object) at the current position of the start marker.

Keyboard shortcut: Ctrl + V



## Duplicate objects



This command duplicates all selected objects. The copies appear beside the original and can be placed in the correct position using drag & drop.

Keyboard shortcut: Ctrl + D

## Delete objects



This function deletes the selected [scene](#) (or the selected object in "Timeline" mode).

Keyboard shortcut: Del

## Select all objects

All objects in the arrangement will be selected.

Keyboard shortcut: Ctrl + A

## Cut

### Split scene

This command cuts a [scene](#)

at the point where the playback marker is positioned. This way, two free-standing objects are created.

Keyboard shortcut: T

# Cut

## **Split scene**

This command cuts a [scene](#) at the point where the playback marker is positioned. This way, two free-standing objects are created.  
Keyboard shortcut: T

## **Split scene**

This command cuts a [scene](#) at the point where the playback marker is positioned. This way, two free-standing objects are created.  
Keyboard shortcut: T

## **Delete scene start**

This command cuts a [scene](#) at the point where the start marker is positioned, and deletes all material that precedes the start position simultaneously.

Shortcut key: Shift + T

## Delete scene end

This command cuts a [scene](#) at the point where the start marker is positioned, and deletes all material behind the start position simultaneously.

Shortcut: Shift + Z

## Remove scene

If you want to cut a [scene](#) out of a [movie](#) retroactively, this option automatically moves all objects, titles, and transitions on all tracks forwards so that no gaps result.

Objects on other tracks which [project](#) into the area of the selected scene will not be moved automatically; they will remain at the current position.

Keyboard shortcut: Ctrl + Del

## Split movie

This command splits a [movie](#) at the point where the playback marker is positioned, making two separate movies. The part before the playback marker will remain in the arranger. The remaining part will be erased from the current arranger and turned into a new movie, which can be found in the "Window" [menu](#).

Keyboard shortcut: Alt + T

## **Remove scene**

If you want to cut a [scene](#) out of a [movie](#) retroactively, this option automatically moves all objects, titles, and transitions on all tracks forwards so that no gaps result.

Objects on other tracks which [project](#) into the area of the selected scene will not be moved automatically; they will remain at the current position.

Keyboard shortcut: Ctrl + Del

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This command splits a [movie](#) at the point where the playback marker is positioned, making two separate movies. The part before the playback marker will remain in the arranger. The remaining part will be erased from the current arranger and turned into a new movie, which can be found in the "Window" [menu](#).

Keyboard shortcut: Alt + T



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This command splits a [movie](#) at the point where the playback marker is positioned, making two separate movies. The part before the playback marker will remain in the arranger. The remaining part will be erased from the current arranger and turned into a new movie, which can be found in the "Window" [menu](#)

Keyboard shortcut: Alt + T

## **Musical editing**

If your background music is edited using the [beat recognition assistant](#), you can automatically adapt your cuts to the tempo with this option. All hard cuts (no crossfaded objects) are shifted across the musical quarter note positions.

Keyboard shortcut: Ctrl + Shift + U

## Range

MAGIX [Movie](#) Edit Pro 16 provides object-based functions as well as "band-oriented" editing functions. These always refer to the whole [project](#) from the first to the last track as well as to the area between the start and end marker.

## Cut out

The section between the in and out points is cut from the current arrangement and placed on the [clipboard](#)

. This section can then be reinserted elsewhere.

Keyboard shortcut: Ctrl + Alt + X

## Copy

The section between the in and out points is copied from the current arrangement to the [clipboard](#)

. This section can then be reinserted elsewhere.

Keyboard shortcut: Ctrl + Alt + C

## Delete

The section between the in and out points is deleted from the current arrangement and not copied to the [clipboard](#)

.

Keyboard shortcut: Ctrl + Del

## Insert

The contents of the [clipboard](#) are inserted at the current arrangement's position of the in point.

Keyboard shortcut: Ctrl + Alt + V

## Extract

The section between the in and out points is preserved, and all of the material in front and behind it are deleted. Use this option to isolate a specific part of an arrangement for further individual editing.

Keyboard shortcut: Ctrl + Alt + P

## **Cut out**

The section between the in and out points is cut from the current arrangement and placed on the [clipboard](#)

. This section can then be reinserted elsewhere.

Keyboard shortcut: Ctrl + Alt + X

## **Copy**

The section between the in and out points is copied from the current arrangement to the [clipboard](#)

. This section can then be reinserted elsewhere.

Keyboard shortcut: Ctrl + Alt + C

## **Delete**

The section between the in and out points is deleted from the current arrangement and not copied to the [clipboard](#)

.  
Keyboard shortcut: Ctrl + Del

## **Insert**

The contents of the [clipboard](#) are inserted at the current arrangement's position of the in point.

Keyboard shortcut: Ctrl + Alt + V

## **Extract**

The section between the in and out points is preserved, and all of the material in front and behind it are deleted. Use this option to isolate a specific part of an arrangement for further individual editing.

Keyboard shortcut: Ctrl + Alt + P

## **Copy**

The section between the in and out points is copied from the current arrangement to the [clipboard](#). This section can then be reinserted elsewhere.

Keyboard shortcut: Ctrl + Alt + C

## **Delete**

The section between the in and out points is deleted from the current arrangement and not copied to the [clipboard](#).

Keyboard shortcut: Ctrl + Del

## **Insert**

The contents of the [clipboard](#) are inserted at the current arrangement's position of the in point.

Keyboard shortcut: Ctrl + Alt + V

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The section between the in and out points is preserved, and all of the material in front and behind it are deleted. Use this option to isolate a specific part of an arrangement for further individual editing.

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The contents of the [clipboard](#) are inserted at the current arrangement's position of the in point.

Keyboard shortcut: Ctrl + Alt + V

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The section between the in and out points is preserved, and all of the material in front and behind it are deleted. Use this option to isolate a specific part of an arrangement for further individual editing.

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The contents of the [clipboard](#) are inserted at the current arrangement's position of the in point.  
Keyboard shortcut: Ctrl + Alt + V

## **Extract**

The section between the in and out points is preserved, and all of the material in front and behind it are deleted. Use this option to isolate a specific part of an arrangement for further individual editing.  
Keyboard shortcut: Ctrl + Alt + P

## **Extract**

The section between the in and out points is preserved, and all of the material in front and behind it are deleted. Use this option to isolate a specific part of an arrangement for further individual editing.

Keyboard shortcut: Ctrl + Alt + P



## Form group



Orders all selected objects into groups. As soon as an object from the group is selected, all other objects in the group will be highlighted as well so that you can work on them collectively.

Keyboard shortcut: Ctrl + L

## Ungroup objects



This turns all selected objects into free-standing objects again.

Keyboard shortcut: Ctrl + M

## **Wizards**

In this section:

[Slideshow Maker](#)

[Soundtrack Maker](#)

[Travel route animation](#)

## **Slideshow Maker**

Opens the [Slideshow Maker](#)

Keyboard shortcut: Ctrl + Shift + M

## **Soundtrack Maker**

This command opens [MAGIX Soundtrack Maker](#)

Keyboard shortcut: W

## Travel route animation

This [menu](#)

entry opens the separate Travel route animation program. This enables simple creation of animated travel routes with the help of online maps.

**Note:** In order to be able to use current map data, maps are fetched by Travel route animation directly from the Internet. This requires an active Internet connection.

More information about the program is available in the help file, which can be opened by pressing the "F1" key.

## Mixdown Audio

This option joins all [audio](#) objects in one audio file. The sound material will only occupy one track of the arranger and will hardly affect the RAM, but it will occupy approximately 10 MB (in stereo) on the hard drive. This will give you more control over the arranger and more space for additional objects.

MAGIX [Movie](#) Edit Pro 16 automatically normalizes the audio file, i.e. the loudest part of the [wave](#) audio object is identical with the highest figure of the 16-bit resolution ceiling. This guarantees the same sound quality, even if you repeat the mix down procedure or you combine the mix down file with other wave audio objects again and again.

The mix function is very helpful if you want to go on using the mixdown object. For the final [AVI](#) or [WAV](#) (or any other multi-media) file, which is designed for burning a CD or for use on other PCs, use the "Export arrangement" [submenu](#) options from the file [menu](#) instead of the mixdown function.

### Tip:

Instead of using the mixdown function, you can use the various options of th submenu "Export movie" in the File menu to create a final final \*.avi or \*.wav (or any other multimedia) file.

Keyboard shortcut: Shift + M

## **Audio and video mixdown**

In addition to the "Mix down [audio](#)" function (see above), all video objects including effects, fades, and edits in a single [MAGIX video file](#). If this overloads your [CPU](#), try closing some other programs.



## Edit snap point

If the position of objects, object borders, markers, or the playback marker is changed with the mouse, these will automatically spring to certain "key positions" if you get close enough to them. This functions as a "notch", i.e. even objects in a higher zoomed resolution can be precisely positioned, without any gaps, which you wouldn't normally see in that resolution. Normally, all object borders and all markers lock to one another.

- Per object, one additional snap point can now be placed within an object to mark positions where other objects should snap to. This is helpful if you want to show a title at a certain spot in a video object, for example.
- To set a snap point, select an object and place the playback marker at the position where you would like the snap point to be.
- Next, use "**Set snap point**" to set the point. Likewise, "**Delete snap point**" removes a snap point. As soon as you select the option "Set snap point" at another position it will be moved automatically.
- "**Delete all snap points**" deletes all snap points for all objects.

Keyboard shortcut: Alt + Shift + P

# Marker

## **Set project marker**

This option sets a [project](#) marker at the current playback position. More information about project markers is available in the chapter "Markers" under "[Set project marker](#)".

## Delete project marker

Deletes the selected [project marker](#). [Project](#) markers can be deleted and renamed via the [context menu](#)

.

## Set chapter marker



Sets a chapter marker at the position of the playback marker.

This creates a chapter entry in the disc [menu](#), in case you are planning to burn the [movie](#) to CD/DVD.

You can rename your chapter markers by right clicking and selecting "Rename". The name then appears in the [chapter menu](#)

.

Shortcut: Shift + Enter

## **Automatic chapter markers**

Automatically sets chapter markers in the arrangement based on certain rules. These chapter markers determine the chapters in your DVD [menu](#)

. This function is useful if you want to burn your recording onto disc right away.

There are a few options for automatic chapter generation:

### **At the beginning of the [movie](#):**

The movie contains only one chapter

### **At the object starts in a track...:**

Every object in a track creates a chapter. Track 1 is preset.

### **At the position of existing title objects:**

Subtitles, for instance as faded-in subheadings, give the position of the chapter markers.

### **Provide interval (in minutes)/provide quantity:**

If the chapters are separated without any particular method and are just needed for quicker navigation, you can also insert chapter markers in pre-defined intervals or as a pre-defined number of chapter markers.

### **Titling the chapter markers:**

To title the chapter markers, you can use a user-defined name with consecutive numbers or the object name or text from the text objects.

Optionally, you can delete existing chapter markers and confine the automatic chapter marker function to the area between the start and end markers.

Keyboard shortcut: Alt + Shift + Enter

### **Delete (all) chapter markers**

Deletes one or all chapter markers. This removes chapter entries from the disc [menu](#).  
. Read more in "Burn screen".

Keyboard shortcut: Ctrl + Enter / Alt + Ctrl + Enter

### **Marker -> Set range start/end**

Sets a range start/end marker at the position of the playback marker.

Keyboard shortcut: I/O

### **Marker -> Jump to range start/end**

Sets the playback marker at the position of the range start/end.

Shortcut: Shift + I/O

### **Marker -> Reset selected range**

Deletes the range start and the range end.

**Marker -> Set range start/end**

Sets a range start/end marker at the position of the playback marker.

Keyboard shortcut: I/O

**Marker -> Jump to range start/end**

Sets the playback marker at the position of the range start/end.

Shortcut: Shift + I/O

**Marker -> Reset selected range**

Deletes the range start and the range end.

## **Move screen view**

Using these commands, a viewable portion together with the start marker will be moved in the timeline.

You can quickly skip between different markers (skip, chapter, [scene](#), ad-marker) and object edges.

Keyboard shortcut: See "Keyboard shortcuts", "[Arranger](#)".

## **Multicam**

This command switches to [Multicam mode](#)



## **Multicam**

This command switches to [Multicam mode](#)

# Effects (FX)

In this chapter

[Master effects](#)

[Video object effects](#)

[Audio object effects](#)

[Title Effects](#)

[Design elements](#)

[Effects library](#)

[Synthesizer](#)

## Master effects

This [menu](#) item accesses the [movie's effects settings](#). The settings made in this case will affect the entire film.  
Shortcut: Ctrl + B

## **Video object effects**

## Scene recognition

Calls up the automatic [scene](#) recognition, which "cuts up" longer videos into scenes for storage in the "Takes" directory.  
Keyboard shortcut: Shift + Z

## **Bildstabilisierung**

Opens the "Motion stabilizer" [dialog](#) for you to correct shaky footage. Please read the chapter "[Motion stabilizer](#)".

Keyboard shortcut: Shift + K

## **Searching for and removing ads (only in Plus version)**

Opens the [dialog](#) for [searching and removing advertising](#)

Keyboard shortcut: Shift + C

## **Edit in external editor**

Graphic files (BMPs or JPEGs) from the arranger can be post-edited in an external graphics program. The selected [image](#) file is loaded automatically and, once editing has been completed, is used in the MAGIX [Movie](#) Edit Pro 16 instead of the original material. For this, MAGIX [Movie](#) Edit Pro 16 offers the high-performance photo editing program MAGIX Xtreme Photo Designer.



## **Save photos with effects**

This allows you to save photos used in the [movie](#) and add the object effects used in MAGIX Movie Edit Pro 16 (e.g. StoryMaker) to the photo.

## **Create panorama...**

Opens the [dialog](#) for setting a panorama. Place as many photos in the correct order as you like, and align brightness and color settings to get the best results. You should make sure that the photos harmonize at the transitions.

## **Video effects**

These are the various effects which can be applied to videos and stills. The effects can be set after an object is selected in the respective effects [dialog](#) which appears. For more information, see the "[Video effects in the Media Pool](#)

" chapter.

## **Video effect templates**

This features general templates that can be added to the video objects via drag & drop and several video mix effects that can be quickly and easily applied, e.g. bluescreen.

## **Movement effects**

These are movement effects you can use to animate the [frame](#) by using zoom or camera movements. For more information, go to the "Effects and titles" chapter in "[Movement effects in Media Pool](#)".

## **Movement effect templates**

These are templates for movement effects. These can be added from the Media Pool into the arrangement by double-clicking or via drag & drop.

## **Section**

Places video objects in a particular part of the screen. Please read the "Video effects" chapter for more details.

## **Background design**

Select a color, a picture, or any video on your [hard disk](#) which you would like to serve as the background for the photo displayed. This function is especially useful when photos have black bars around them, or if they are reduced in size.

## **Reset background**

Resets the [background design](#) settings to default settings.



## **Set as background**

Uses the selected photo or video as the background.

## **Load video effects**

This command lets you load a saved effects combination for the currently selected object. If you have selected multiple objects, then the effects combination for each object will be applied.

Shortcut: Alt + Shift + O

## **Save video effects**

This command lets you save the current effects combination for each object separately.

Shortcut: Alt + Shift + S

## **Reset video effects**

This option allows you to deactivate all currently used effects entirely if you want to undo the changes.

Shortcut: Alt + Shift + C

### **Load video effects**

This command lets you load a saved effects combination for the currently selected object. If you have selected multiple objects, then the effects combination for each object will be applied.

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This option allows you to deactivate all currently used effects entirely if you want to undo the changes.

Shortcut: Alt + Shift + C

## **Reset video effects**

This option allows you to deactivate all currently used effects entirely if you want to undo the changes.  
Shortcut: Alt + Shift + C

## **Copy video effects**

Effects settings for an object can be copied to the [clipboard](#) to [add](#) them to other objects.

## **Insert video effects**

Video effects can be added from other objects to the one selected. The settings must be [copied](#) to the [clipboard](#) beforehand to do so.

## **Apply video effects to all**

The current effects settings will be applied to all scenes and photos in your [movie](#)

## **Apply video effects to all of the following**

The current effects settings will be applied to all scenes and photos in your [movie](#) which lie behind the selected object.



## **Audio object effects**

## **Normalize**

The "Normalize [audio](#)

" function increases the level of the audio object to the maximum possible without overmodulating the material. To do this, the largest signal peak in the audio material and the level of the object are detected so that this point corresponds exactly to 0dB (full modulation).

Keyboard shortcut: Shift + N

## **Reduce volume**

Please see "[Reducing volume](#)" in the [audio effects](#) chapter.

Keyboard shortcut: Alt + Shift + L

## **Set volume**

This function, located in both the effects [menu](#) and the [context menu](#), controls the sound volume for individual objects, just like the object [handles](#) in the arranger.

## **Audio cleaning**

Please see "[Audio cleaning](#)" in the "[Audio effects](#)" chapter

Keyboard shortcut: Shift + W

## **Echo/Hall**

Please see "[Reverb/Echo](#)" in the chapter "[Audio effects](#)".

Keyboard shortcut: Shift + H

## **Timestretch/Resample**

Read more about this in "[Timestretch/Resample](#)"

Keyboard shortcut: Shift + Q

## **Load audio effects**

This command lets you load a saved effects combination for the currently selected object. If you have selected multiple objects, then the effects combination for each objects will be applied.

Keyboard shortcut: Ctrl + Alt + O



## **Save audio effects**

This command lets you save the current effects combination for each object separately.

Keyboard shortcut: Ctrl + Alt + S

## **Reset audio effects**

This option allows you to deactivate all currently used effects entirely if you want to undo the changes.

Keyboard shortcut: Ctrl + Alt + K

## **BPM Wizard**

Please see "BPM wizard" in the chapter "[Audio](#)".

Keyboard shortcut: Shift + E

## **Volume curve**

The most important object effects curve, allowing the volume to be immediately accessible. Volume is also located in the Media Pool under "Effects -> [Audio](#) effects -> General", and can also be animated there.

Keyboard shortcut: Alt + X

# Title Effects

## Title Editor



Opens the [title editor](#) for the selected photo, video, or title object.

Keyboard shortcut: Ctrl + T

## **Load Title Effects**

You can store the current preset effects combination for each title object separately and later apply them to other title objects if they have worked satisfactorily.

## Save Title Effects

You can store the current preset effects combination for each title object separately and apply it later to other title objects.

Keyboard shortcut: Alt + T

## Design elements

**Multi picture-in-picture:** These are various effects presets for [image](#) stacking.

### Collages

: These work similarly to normal picture-in-picture effects, but more objects are used. Depending on the collage, arrange the selected objects one after the other and drag the collage onto the first object.

### Portrait effects

: Select individual effects which are especially suited to vertically formatted photos.

### Image objects

: These are various image objects like black bars, thought bubbles for cartoons, etc.

### Intros/Outros

: These are beginning and end scenes for films with various themes.

### Visuals

: Graphical displays of any played sounds which can be combined with other video material.

## Effects library

Using these [menu](#) choices, you can control the corresponding directories in the [Media Pool](#)

## Synthesizer

Synthesizers in MAGIX [Movie](#)

Edit Pro 16 can be loaded as individual objects. This is less of an effect than a technical means of producing your own sound effects. More information is available in "Synthesizers".



# Windows menu

In this section:

[Cut Trimmer](#)

[Object trimmer](#)

[Mixer](#)

[Master audio effect rack](#)

[Mastering Suite](#)

[Program monitor](#)

[Media Pool](#)

[Project](#)

[Reset window arrangement](#)

[Display settings](#)

[Show movie overview](#)

[Optimize movie view](#)

[Zoom horizontal](#)

[Zoom vertical](#)

[Close all movies](#)

## Cut Trimmer

Shows or hides the "Cut trimmer" window. This allows you to make fine adjustments to the position of the selected video or [image](#) objects and their [handles](#)

? as well as the transition characteristics (transition type, length). Please read the "Fine adjustment of video ("Trimming")" chapter for more details.

Keyboard shortcut: N

## Object trimmer

Shows or hides the "Cut trimmer" window. Opens up the video trimmer to help you fine tune the position and the [handles](#)

of a video object. Please read the "Fine adjustment of video ("Trimming")" chapter for more details.

Shortcuts: Q

## Mixer



This option allows you to display or conceal the real-time mixer. You will find further information, especially with regard to the integration of effects plug-ins, in the chapter "Mixer".

Keyboard shortcut: M

## **Master audio effect rack**

Opens or closes the master effects rack; you can also use the "Master FX" [button](#) in the mixer window for this.

Keyboard shortcut: B

## **Mastering Suite**

This opens the [Mastering Suite](#)

## **Program monitor**

Opens and closes the video window. If the standard layout is chosen the Mediapool can be shown in a freely scalable and moveable window.

Keyboard shortcut: V

## **Program monitor**

Opens and closes the video window. If the standard layout is chosen the Mediapool can be shown in a freely scalable and moveable window.

Keyboard shortcut: V

## **Media Pool**

This option can be used to conceal the Media Pool or make it visible again.  
Keyboard shortcut: F

## **Project**

Shows/Hides the arranger



## **Reset window arrangement**

This option resets the window arrangement to its default state.  
Shortcut key: F9

## Display settings

See program settings -> "[Display presets](#)" in the PDF manual.

Shortcut: Alt + Shift + V

## **Show movie overview**

With this option, you can display an overview of the entire arrangement on the video screen. It is particularly suitable for long and complex arrangements to prevent you from losing track. You can view the whole [movie](#)

and you are, despite this, able to access the object you're looking for in a split second ? you can zoom in directly on the video monitor or move around the clip displayed in the arranger.

Shortcut: Shift + A

## Optimize movie view



The zoom level is set to 100% so that you can see every object and the entire film.

The start and end markers are set to the beginning or end so that the entire [movie](#) can be played.

Shortcut: Shift + B

## **Zoom horizontal**

Here you will find a range of functions for altering the visible time axis section.

## **Zoom vertical**

The number of simultaneously visible tracks can be changed here. The more tracks are visible, the smaller they will appear.

## **Close all movies**

Closes all opened movies.

# Online menu

This is a list of [menu](#) entries regarding all of the services that are available directly from within MAGIX

[Movie](#)

Edit Pro 16.

# Tasks menu

In this [menu](#)

you will find direct solution and short video explanations on how to perform tasks in different topics. Not only will you find step-by-step instructions for sound and pictures here, but you also find quick access to many of functions.

If you click on an entry with a camera symbol, then you will open a short tutorial video which displays a solution. Entries without camera symbols offer a solution to the problem immediately.



# Help menu

In this section:

[Help](#)

[Content](#)

[Context help](#)

[Quickstart/Recording/Editing/Burning and exporting tutorial video](#)

[Ask questions online in the Knowledge Community](#)

[Find knowledge & workshops](#)

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[About MAGIX Movie Edit Pro 16](#)

[Register online](#)

[Online update](#)

[Download presets for new device](#)

[Download video effects plug-ins](#)

[Display tool tips](#)

[Reset program settings to default...](#)

## Help

This command is available for almost every feature of the program, and it opens the "Help" file for the corresponding topic. Use this command to get help on any of MAGIX [Movie](#)

Edit Pro 16's functions.

Keyboard shortcut: F1

## Content

Use the command "Content" in the "Help" [menu](#) to open the start page of the help file. You can read through the help file step-by-step and jump to specific sections via the tree structure on the right hand side.

## Context help



By choosing the context help entry from the "Help" [menu](#), or by clicking on the [button](#) in the top [toolbar](#), the mouse cursor will turn into an arrow with a question mark.

Then, when you click on any [button](#) of the main screen, program help describing the control element in question will open.  
Shortcut key: Alt + F1

## **Quickstart/Recording/Editing/Burning and exporting tutorial video**

Displays tutorial videos on different video editing topics in MAGIX [Movie Edit Pro 16](#).

### **Tip**

: If you are using MAGIX Movie Edit Pro 16 for the first time, we recommend you view the tutorial videos first. They will give you a quick introduction to the most important topics.

## **Ask questions online in the Knowledge Community**

Ask [magix.info](#) a question.

## **Find knowledge & workshops**

Have a look at the newest workshops at [magix.info](#) and read useful tips from other MAGIX [Movie Edit Pro 16](#) users.

## **Ask questions online in the Knowledge Community**

Ask magix.info a question.

## **Find knowledge & workshops**

Have a look at the newest workshops at magix.info and read useful tips from other MAGIX [Movie](#)

Edit Pro 16 users.

## Online tutorials

Interesting tutorials and useful tips for working with MAGIX [Movie](#) Edit Pro 16 can be found on the MAGIX website.

An online connection is required.

## Get in contact with other users

MAGIX Screenshare allows you to transfer the contents of your screen to other users (Screen transfer as guest) or view the screens of other users (Screen transfer as host).

To transfer the contents of your monitor to another user, select the [menu](#) item "**Transfer screen as host**". The MAGIX Screenshare start screen will appear. Now click "Start session".

### Note

: Clicking your name allows you to change it as it appears in the session. In the start screen, you can also set if you would like to view the guest's screen as the host via the "Settings" tab under "Options".



Two windows will open. A large one which shows other screen contents as required, and a smaller one which displays your session ID. Provide this number to all users who would like to view your screen.

### Note

: The session ID changes with every new session.

If you would like to receive another user's screen contents, you will require the session ID. Select the menu item "**Transfer screen as guest**". In the [dialog](#) that opens, enter the session ID you received and click "Start session".

## **About MAGIX Movie Edit Pro 16**

Displays [copyright](#) info and version number of MAGIX [Movie Edit Pro 16](#).



## Register online

This option opens the MAGIX homepage for online registration where you can register yourself as a MAGIX user.

Registration grants you access to the [MAGIX support website](#)

(see support) where various program updates and help programs can be downloaded.

With the registration form supplied (start [menu](#) under "MAGIX [Movie](#)

Edit Pro 16 -> Service and support -> Register") you can register via post or fax. Simply print it out, fill it in, and send it off!

## Online update

Connects directly to the MAGIX online update page where you can get the latest version of your program.

## Download presets for new device

It's possible that your device will not be supported for import or export of video material by MAGIX [Movie](#)

Edit Pro 16.

The command "Download presets for new device" in the "Help" [menu](#) opens a website containing an up-to-date list of all supported devices and device versions. Just search for the desired device and click the corresponding link. The settings for the device will be downloaded and made available to you in MAGIX Movie Edit Pro 16.

### Warning

: Some browsers display a warning if you try to download an executable file (.exe). You can ignore this warning.

If your device is not listed on the website, you can report your unsupported device so that it will be included in later updates.

## Download video effects plug-ins

This command lets you download new [video effects plug-ins](#)

## Display tool tips

Tooltips are small information windows that open up automatically if the mouse pointer stops briefly on a [button](#) or some other area. They provide information about the function of the [button](#)

. These information boxes can be switched on or off with this option.

Keyboard shortcut: Ctrl + Shift + F1

## Reset program settings to default...

Use this function to reset all program settings you made in MAGIX [Movie](#)

Edit Pro 16 to their original settings.

## **Reset program settings to default...**

Use this function to reset all program settings you made in MAGIX [Movie](#)  
Edit Pro 16 to their original settings.

# Context menu (right click)

## [Context menu](#)

can be reached by right clicking on a selected object. It offers functions which are available and can be expected in the given context.

In this section:

[Video objects](#)

[Image objects](#)

[Transitions](#)

[Audio objects](#)

[Text objects](#)

[MAGIX 3D Maker objects](#)

# Video objects

In this section:

[Create frame table \(new\)](#)

[Scene recognition](#)

[Bildstabilisierung](#)

[Searching for and removing ads \(only in Plus version\)](#)

[Cut Trimmer](#)

[Object trimmer](#)

[Audio/Video Offset](#)

[Edit snap point](#)

[Create still frame](#)

[Audio cleaning](#)

[Motion](#)

[Section](#)

[Attach to picture position in the video](#)

[Interpolation for interlace material](#)

[Anti-flicker filter](#)

[Border cropping adjustment:](#)

[Background design](#)

[Video effects](#)

[Copying objects](#)

[Cut objects](#)

[Delete objects](#)

[Add time code](#)

[Object properties](#)

## Create frame table (new)

Sometimes, rebuilding a [frame](#) table can get rid of problems in certain [MPEG](#) files. For example, such problems can be present if the navigation (positioning of the playback marker, transport) is bumpy or doesn't function at all.

Normally, when loading MPEG video, a frame table is not created in order to speed up the loading process. If you do create one anyway, MPEG files are normally noticeably faster and easier to edit.

## Scene recognition

Calls up the automatic [scene](#) recognition, which "cuts up" longer videos into scenes for storage in the "Takes" directory.

Keyboard shortcut: Shift + Z



## **Bildstabilisierung**

Opens the "Motion stabilizer" [dialog](#) for you to correct shaky footage. Please read the chapter "[Motion stabilizer](#)"

"

Keyboard shortcut: Shift + K

## **Searching for and removing ads (only in Plus version)**

Opens the [dialog](#) for [searching and removing advertising](#)

Keyboard shortcut: Shift + C

## Cut Trimmer

Shows or hides the "Cut trimmer" window. This allows you to make fine adjustments to the position of the selected video or [image](#) objects and their [handles](#)

? as well as the transition characteristics (transition type, length). Please read the "Fine adjustment of video ("Trimming")" chapter for more details.

Keyboard shortcut: N

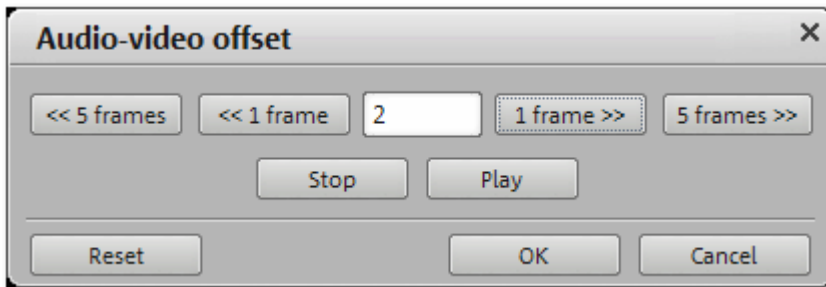
## Object trimmer

Shows or hides the "Cut trimmer" window. Opens up the video trimmer to help you fine tune the position and the [handles](#)

of a video object. Please read the "Fine adjustment of video ("Trimming")" chapter for more details.

Shortcuts: Q

## Audio/Video Offset



You can use this [dialog](#) to balance the sound & [image](#) time differences. A positive value shifts the [audio](#) material back, a negative value moves it forwards.

## Edit snap point

If the position of objects, object borders, markers, or the playback marker is changed with the mouse, these will automatically spring to certain "key positions" if you get close enough to them. This functions as a "notch", i.e. even objects in a higher zoomed resolution can be precisely positioned, without any gaps, which you wouldn't normally see in that resolution. Normally, all object borders and all markers lock to one another.

- Per object, one additional snap point can now be placed within an object to mark positions where other objects should snap to. This is helpful if you want to show a title at a certain spot in a video object, for example.
- To set a snap point, select an object and place the playback marker at the position where you would like the snap point to be.
- Next, use "**Set snap point**" to set the point. Likewise, "**Delete snap point**" removes a snap point. As soon as you select the option "Set snap point" at another position it will be moved automatically.
- "**Delete all snap points**" deletes all snap points for all objects.

Keyboard shortcut: Alt + Shift + P

## Create still frame

MAGIX [Movie](#) Edit Pro 16 can create a still [frame](#) of an object at the position of the start marker.

## **Audio cleaning**

Please see "[Audio cleaning](#)" in the "[Audio effects](#)" chapter

Keyboard shortcut: Shift + W



## **Motion**

Lets you move video objects on the screen. See "Movement" in the "Video effects" chapter.

## **Section**

Places video objects in a particular part of the screen. Please read the "Video effects" chapter for more details.

## **Attach to picture position in the video**

This can be used to attach the current video, [image](#), or (3D) text object to a movement path in another video object. Read more about this in the chapter "[Magnetic objects](#)".

## **Interpolation for interlace material**

Choose this option to remove [interlace](#) artifacts from your video [image](#)

. If, for instance, you extract freeze frames from a video, ridge structures appear in sequences which feature movement.

## **Anti-flicker filter**

Choose this option for still pictures with detailed structures and high contrast. This filter reduces line flickering during TV playback.

## **Border cropping adjustment:**

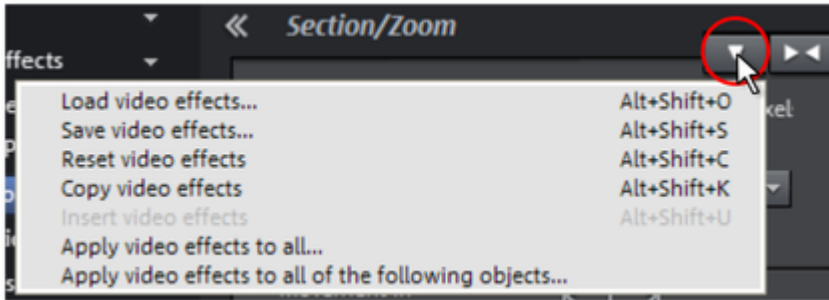
Select this option if the edges are cropped during playback on your television. Values stored in "[Movie effects settings](#)" ("Effects" [menu](#)) will be applied.

## **Background design**

Select a color, a picture, or any video on your [hard disk](#) which you would like to serve as the background for the photo displayed. This function is especially useful when photos have black bars around them, or if they are reduced in size.

## Video effects

The entries for this [submenu](#) are directly available in the Media Pool.



In this section:

[Load video effects](#)

[Save video effects](#)

[Reset video effects](#)

[Copy video effects](#)

[Insert video effects](#)

[Apply video effects to all](#)

[Apply video effects to all of the following](#)

### Load video effects

This command lets you load a saved effects combination for the currently selected object. If you have selected multiple objects, then the effects combination for each object will be applied.

Shortcut: Alt + Shift + O

### Save video effects

This command lets you save the current effects combination for each object separately.

Shortcut: Alt + Shift + S

### Reset video effects

This option allows you to deactivate all currently used effects entirely if you want to undo the changes.

Shortcut: Alt + Shift + C



### **Load video effects**

This command lets you load a saved effects combination for the currently selected object. If you have selected multiple objects, then the effects combination for each object will be applied.

Shortcut: Alt + Shift + O

### **Save video effects**

This command lets you save the current effects combination for each object separately.

Shortcut: Alt + Shift + S

### **Reset video effects**

This option allows you to deactivate all currently used effects entirely if you want to undo the changes.

Shortcut: Alt + Shift + C

## **Save video effects**

This command lets you save the current effects combination for each object separately.

Shortcut: Alt + Shift + S

## **Reset video effects**

This option allows you to deactivate all currently used effects entirely if you want to undo the changes.

Shortcut: Alt + Shift + C

## **Reset video effects**

This option allows you to deactivate all currently used effects entirely if you want to undo the changes.  
Shortcut: Alt + Shift + C

## **Copy video effects**

Effects settings for an object can be copied to the [clipboard](#) to [add](#) them to other objects.

## **Insert video effects**

Video effects can be added from other objects to the one selected. The settings must be [copied](#) to the [clipboard](#) beforehand to do so.

## **Apply video effects to all**

The current effects settings will be applied to all scenes and photos in your [movie](#)

## **Apply video effects to all of the following**

The current effects settings will be applied to all scenes and photos in your [movie](#) which lie behind the selected object.

## Copying objects



This function copies the selected [scene](#) (or the selected object in Timeline mode) to the [clipboard](#). You can then use the "Paste" command to place it into any [movie](#)

Keyboard shortcut: Ctrl + C



## Cut objects



This function deletes the selected [scene](#) (or the selected object in "Timeline" mode) and copies it to the [clipboard](#). You can then use the "Paste" command to copy it into any [movie](#)

Keyboard shortcut: Ctrl + X

## Delete objects



This function deletes the selected [scene](#) (or the selected object in "Timeline" mode).

Keyboard shortcut: Del

## Add time code

MAGIX [Movie](#) Edit Pro 16 can add a time or date ("timecode") to the picture material. To add a timecode, right click on the video object and choose the "Fade in date as title" option from the [context menu](#)

- If you're using a DV-[AVI](#) file (a digital recording from a camcorder, for instance), then the recording date will be used from the selected section.
- If you're using a different file, the creation date will be used as the timecode.

The title editor is then opened in order to customize the entry.

## Object properties

This function displays all of the information about the currently selected objects such as file name, position on the hard drive, tempo, etc. The object editor also defines the foreground and background color of every object in the arrangement. Depending on the type of object, the elements displayed will vary.

### General information

The name of the selected object and the fore/background color for the object in unselected status can be changed here. Additional information is also displayed about which file the selected object points to.

### [Interlace/Deinterlace](#)

(only for video objects)

The tab "Interlace/Deinterlace" lets you specify the interlace editing of the video material.

### **Interlace properties:** Normally, MAGIX [Movie](#)

Edit Pro 16 automatically makes suitable settings for this; however, if the video material is faulty, you may have to make some adjustments yourself. If playback of the exported movie is very jittery or if flickering occurs, or if some effects do not look how they should, you can reverse the source material frames.

### **Deinterlace options:** Normally, the setting "**Automatic interlace processing**

" does not have to be changed. The frames are processed separately and passed to the encoder when exported. If necessary, MAGIX Movie Edit Pro 16 will perform high-quality interlacing. If "No interlace processing" is set, then it is assumed that the source material contains full frames.

For more information on interlacing, please see "[Interlace](#)

".

### **Tempo/Pitch** ([audio](#)

objects only)

If there is information about the tempo, then the tempo can be doubled or halved here. The tempo can be detected using [Tempo and beat recognition](#)

.

Keyboard shortcut: Ctrl + E

# Image objects

In this section:

[Create frame table \(new\)](#)

[Scene recognition](#)

[Edit snap point](#)

[Change photo length](#)

[Edit in MAGIX Xtreme Photo Designer](#)

[Save photos with effects](#)

[Create panorama...](#)

[Motion](#)

[Section](#)

[Attach to picture position in the video](#)

[Cut automatically to fit screen](#)

[Anti-flicker filter](#)

[Border cropping adjustment:](#)

[Background design](#)

[Export to MAGIX Online Album](#)

[Export to MAGIX Online Print Service](#)

[Video effects](#)

[Copying objects](#)

[Cut objects](#)

[Delete objects](#)

[Object properties](#)

## Create frame table (new)

Sometimes, rebuilding a [frame](#) table can get rid of problems in certain [MPEG](#) files. For example, such problems can be present if the navigation (positioning of the playback marker, transport) is bumpy or doesn't function at all.

Normally, when loading MPEG video, a frame table is not created in order to speed up the loading process. If you do create one anyway, MPEG files are normally noticeably faster and easier to edit.

## **Scene recognition**

Calls up the automatic [scene](#) recognition, which "cuts up" longer videos into scenes for storage in the "Takes" directory.

Keyboard shortcut: Shift + Z

## Edit snap point

If the position of objects, object borders, markers, or the playback marker is changed with the mouse, these will automatically spring to certain "key positions" if you get close enough to them. This functions as a "notch", i.e. even objects in a higher zoomed resolution can be precisely positioned, without any gaps, which you wouldn't normally see in that resolution. Normally, all object borders and all markers lock to one another.

- Per object, one additional snap point can now be placed within an object to mark positions where other objects should snap to. This is helpful if you want to show a title at a certain spot in a video object, for example.
- To set a snap point, select an object and place the playback marker at the position where you would like the snap point to be.
- Next, use "**Set snap point**" to set the point. Likewise, "**Delete snap point**" removes a snap point. As soon as you select the option "Set snap point" at another position it will be moved automatically.
- "**Delete all snap points**" deletes all snap points for all objects.

Keyboard shortcut: Alt + Shift + P



## Change photo length

This [dialog](#)

gives exact values regarding the display duration for the selected photo. You may select multiple photos beforehand to change their display duration at once.

## **Edit in MAGIX Xtreme Photo Designer**

Graphics files (BMPs or JPEGs) can be edited in MAGIX Xtreme Photo Designer. The selected [image](#) file is loaded automatically and, once editing has been completed, is used in the MAGIX [Movie](#) Edit Pro 16 instead of the original material.

## **Save photos with effects**

This allows you to save photos used in the [movie](#) and add the object effects used in MAGIX Movie Edit Pro 16 (e.g. StoryMaker) to the photo.

## Create panorama...

Opens the [dialog](#)

for setting a panorama. Place as many photos in the correct order as you like, and align brightness and color settings to get the best results. You should make sure that the photos harmonize at the transitions.

## **Motion**

Lets you move video objects on the screen. See "Movement" in the "Video effects" chapter.

## **Section**

Places video objects in a particular part of the screen. Please read the "Video effects" chapter for more details.

## **Attach to picture position in the video**

This can be used to attach the current video, [image](#), or (3D) text object to a movement path in another video object. Read more about this in the chapter "[Magnetic objects](#)".

## **Cut automatically to fit screen**

This function ensures that images don't have black edges (in case they don't fit into the given format).



## **Anti-flicker filter**

Choose this option for still pictures with detailed structures and high contrast. This filter reduces line flickering during TV playback.

## **Border cropping adjustment:**

Select this option if the edges are cropped during playback on your television. Values stored in "[Movie effects settings](#)" ("Effects" [menu](#)) will be applied.

## **Background design**

Select a color, a picture, or any video on your [hard disk](#) which you would like to serve as the background for the photo displayed. This function is especially useful when photos have black bars around them, or if they are reduced in size.

## **Export to MAGIX Online Album**

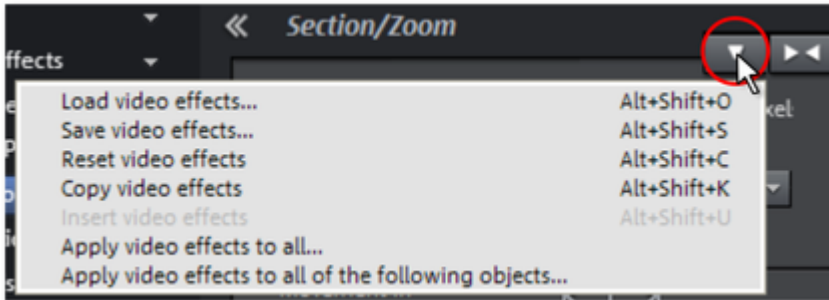
Log in to the MAGIX Online Album service and load images and music into the album to share them with your friends and acquaintances in the Internet. The assistant will lead you step-by-step through the uploading process. After the process is finished, you can access your updated MAGIX Online Album.

## **Export to MAGIX Online Print Service**

Use MAGIX Online Print Service to order high-quality photo prints or fantastic printed photo gifts of your valuable digital photos simply with one click.

## Video effects

The entries for this [submenu](#) are directly available in the Media Pool.



In this section:

[Load video effects](#)

[Save video effects](#)

[Reset video effects](#)

[Copy video effects](#)

[Insert video effects](#)

[Apply video effects to all](#)

[Apply video effects to all of the following](#)

### Load video effects

This command lets you load a saved effects combination for the currently selected object. If you have selected multiple objects, then the effects combination for each object will be applied.

Shortcut: Alt + Shift + O

### Save video effects

This command lets you save the current effects combination for each object separately.

Shortcut: Alt + Shift + S

### Reset video effects

This option allows you to deactivate all currently used effects entirely if you want to undo the changes.

Shortcut: Alt + Shift + C

### **Load video effects**

This command lets you load a saved effects combination for the currently selected object. If you have selected multiple objects, then the effects combination for each object will be applied.

Shortcut: Alt + Shift + O

### **Save video effects**

This command lets you save the current effects combination for each object separately.

Shortcut: Alt + Shift + S

### **Reset video effects**

This option allows you to deactivate all currently used effects entirely if you want to undo the changes.

Shortcut: Alt + Shift + C

## **Save video effects**

This command lets you save the current effects combination for each object separately.

Shortcut: Alt + Shift + S

## **Reset video effects**

This option allows you to deactivate all currently used effects entirely if you want to undo the changes.

Shortcut: Alt + Shift + C



## **Reset video effects**

This option allows you to deactivate all currently used effects entirely if you want to undo the changes.  
Shortcut: Alt + Shift + C

## **Copy video effects**

Effects settings for an object can be copied to the [clipboard](#) to [add](#) them to other objects.

## **Insert video effects**

Video effects can be added from other objects to the one selected. The settings must be [copied](#) to the [clipboard](#) beforehand to do so.

## **Apply video effects to all**

The current effects settings will be applied to all scenes and photos in your [movie](#)

## **Apply video effects to all of the following**

The current effects settings will be applied to all scenes and photos in your [movie](#) which lie behind the selected object.

## Copying objects



This function copies the selected [scene](#) (or the selected object in Timeline mode) to the [clipboard](#). You can then use the "Paste" command to place it into any [movie](#)

Keyboard shortcut: Ctrl + C

## Cut objects



This function deletes the selected [scene](#) (or the selected object in "Timeline" mode) and copies it to the [clipboard](#). You can then use the "Paste" command to copy it into any [movie](#)

Keyboard shortcut: Ctrl + X

## Delete objects



This function deletes the selected [scene](#) (or the selected object in "Timeline" mode).

Keyboard shortcut: Del



## Object properties

This function displays all of the information about the currently selected objects such as file name, position on the hard drive, tempo, etc. The object editor also defines the foreground and background color of every object in the arrangement. Depending on the type of object, the elements displayed will vary.

### General information

The name of the selected object and the fore/background color for the object in unselected status can be changed here. Additional information is also displayed about which file the selected object points to.

### [Interlace/Deinterlace](#)

(only for video objects)

The tab "Interlace/Deinterlace" lets you specify the interlace editing of the video material.

**Interlace properties:** Normally, MAGIX [Movie](#)

Edit Pro 16 automatically makes suitable settings for this; however, if the video material is faulty, you may have to make some adjustments yourself. If playback of the exported movie is very jittery or if flickering occurs, or if some effects do not look how they should, you can reverse the source material frames.

**Deinterlace options:** Normally, the setting "**Automatic interlace processing**

" does not have to be changed. The frames are processed separately and passed to the encoder when exported. If necessary, MAGIX Movie Edit Pro 16 will perform high-quality interlacing. If "No interlace processing" is set, then it is assumed that the source material contains full frames.

For more information on interlacing, please see "[Interlace](#)

".

**Tempo/Pitch** ([audio](#)

objects only)

If there is information about the tempo, then the tempo can be doubled or halved here. The tempo can be detected using [Tempo and beat recognition](#)

.

Keyboard shortcut: Ctrl + E

# Transitions

In this section:

[Cut Trimmer](#)

[Settings...](#)

## Cut Trimmer

Shows or hides the "Cut trimmer" window. This allows you to make fine adjustments to the position of the selected video or [image](#) objects and their [handles](#)

? as well as the transition characteristics (transition type, length). Please read the "Fine adjustment of video ("Trimming")" chapter for more details.

Keyboard shortcut: N

## Settings...

A [dialog](#)

with the settings for the corresponding transition will be displayed. Depending on the transition, different settings are available.

# Audio objects

In this section:

[Create wave form](#)

[Normalize](#)

[Reduce volume](#)

[Set volume](#)

[Audio/Video Offset](#)

[Edit snap point](#)

[Audio cleaning](#)

[Echo/Hall](#)

[Timestretch/Resample](#)

[Load audio effects](#)

[Save audio effects](#)

[Reset audio effects](#)

[Copying objects](#)

[Cut objects](#)

[Delete objects](#)

[BPM Wizard](#)

[Volume curve](#)

[Audio effects curves](#)

[Snap to other audio objects](#)

[Split stereo objects into mono objects](#)

[Display track curves](#)

[Reset track curves](#)

[Export to MAGIX Online Album](#)

[Object properties](#)

## Create wave form

In most cases, the waveform display of an [audio](#) file will not be required. However, if you require this, e.g. to navigate while cutting video, a waveform display can be produced manually via this function.

## Normalize

The "Normalize [audio](#)

" function increases the level of the audio object to the maximum possible without overmodulating the material. To do this, the largest signal peak in the audio material and the level of the object are detected so that this point corresponds exactly to 0dB (full modulation).

Keyboard shortcut: Shift + N

## Reduce volume

Please see "[Reducing volume](#)" in the [audio effects](#) chapter.

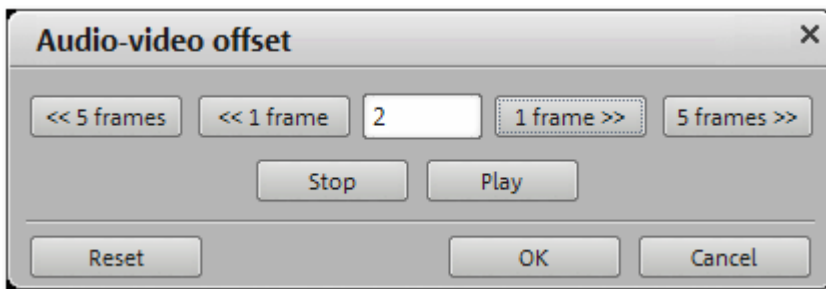
Keyboard shortcut: Alt + Shift + L



## Set volume

This function, located in both the effects [menu](#) and the [context menu](#), controls the sound volume for individual objects, just like the object [handles](#) in the arranger.

## Audio/Video Offset



You can use this [dialog](#) to balance the sound & [image](#) time differences. A positive value shifts the [audio](#) material back, a negative value moves it forwards.

## Edit snap point

If the position of objects, object borders, markers, or the playback marker is changed with the mouse, these will automatically spring to certain "key positions" if you get close enough to them. This functions as a "notch", i.e. even objects in a higher zoomed resolution can be precisely positioned, without any gaps, which you wouldn't normally see in that resolution. Normally, all object borders and all markers lock to one another.

- Per object, one additional snap point can now be placed within an object to mark positions where other objects should snap to. This is helpful if you want to show a title at a certain spot in a video object, for example.
- To set a snap point, select an object and place the playback marker at the position where you would like the snap point to be.
- Next, use "**Set snap point**" to set the point. Likewise, "**Delete snap point**" removes a snap point. As soon as you select the option "Set snap point" at another position it will be moved automatically.
- "**Delete all snap points**" deletes all snap points for all objects.

Keyboard shortcut: Alt + Shift + P

## **Audio cleaning**

Please see "[Audio cleaning](#)" in the "[Audio effects](#)" chapter

Keyboard shortcut: Shift + W

## **Echo/Hall**

Please see "[Reverb/Echo](#)" in the chapter "[Audio effects](#)".

Keyboard shortcut: Shift + H

## **Timestretch/Resample**

Read more about this in "[Timestretch/Resample](#)".

Keyboard shortcut: Shift + Q

## **Load audio effects**

This command lets you load a saved effects combination for the currently selected object. If you have selected multiple objects, then the effects combination for each objects will be applied.

Keyboard shortcut: Ctrl + Alt + O

## **Save audio effects**

This command lets you save the current effects combination for each object separately.  
Keyboard shortcut: Ctrl + Alt + S



## **Reset audio effects**

This option allows you to deactivate all currently used effects entirely if you want to undo the changes.  
Keyboard shortcut: Ctrl + Alt + K

## Copying objects



This function copies the selected [scene](#) (or the selected object in Timeline mode) to the [clipboard](#). You can then use the "Paste" command to place it into any [movie](#)

Keyboard shortcut: Ctrl + C

## Cut objects



This function deletes the selected [scene](#) (or the selected object in "Timeline" mode) and copies it to the [clipboard](#). You can then use the "Paste" command to copy it into any [movie](#)

Keyboard shortcut: Ctrl + X

## Delete objects



This function deletes the selected [scene](#) (or the selected object in "Timeline" mode).

Keyboard shortcut: Del

## **BPM Wizard**

Please see "BPM wizard" in the chapter "[Audio](#)".

Keyboard shortcut: Shift + E

## Volume curve

The most important object effects curve, allowing the volume to be immediately accessible. Volume is also located in the Media Pool under "Effects -> [Audio](#) effects -> General", and can also be animated there.

Keyboard shortcut: Alt + X

## **Audio effects curves**

This feature provides direct access to diverse object effects, and these can be automated using a curve. All of the [audio](#) effects listed here are found in the Media Pool under "Effects -> [Audio](#) effects -> General".

## **Snap to other audio objects**

Video objects grouped with [audio](#)

objects can be used to synchronize recordings from different camera perspectives.

For more information, please see the topic "Synchronize video objects using the audio track".



## Split stereo objects into mono objects

An [audio](#)

object in stereo format can be split into two mono objects very easily using this function. The original track will then feature the audio object with the left channel, and an automatically added track will feature the object with the right channel.

This is useful if the channels were switched by accident during recording, i.e. due to incorrect cabling. In this case, simply open the mixer and set the pan setting to the correct position for each channel.

## Display track curves

The most recently selected track curve is displayed on the object for editing. Use of a curve causes the parameters set in the mixer to be disregarded.

**Note:** The track curves of [audio](#) objects can be animated in the same way as video effects. Read more about this in the chapter "[Animating objects](#)".

## **Reset track curves**

All track curves can be reset with this function. The settings made in the mixer will be applied to the track again.

### **Caution!**

Before applying this function, make sure none of the track curves will be need in the future.

## **Export to MAGIX Online Album**

Log in to the MAGIX Online Album service and load images and music into the album to share them with your friends and acquaintances in the Internet. The assistant will lead you step-by-step through the uploading process. After the process is finished, you can access your updated MAGIX Online Album.

## Object properties

This function displays all of the information about the currently selected objects such as file name, position on the hard drive, tempo, etc. The object editor also defines the foreground and background color of every object in the arrangement. Depending on the type of object, the elements displayed will vary.

### General information

The name of the selected object and the fore/background color for the object in unselected status can be changed here. Additional information is also displayed about which file the selected object points to.

### [Interlace/Deinterlace](#)

(only for video objects)

The tab "Interlace/Deinterlace" lets you specify the interlace editing of the video material.

### **Interlace properties:** Normally, MAGIX [Movie](#)

Edit Pro 16 automatically makes suitable settings for this; however, if the video material is faulty, you may have to make some adjustments yourself. If playback of the exported movie is very jittery or if flickering occurs, or if some effects do not look how they should, you can reverse the source material frames.

### **Deinterlace options:** Normally, the setting "**Automatic interlace processing**

" does not have to be changed. The frames are processed separately and passed to the encoder when exported. If necessary, MAGIX Movie Edit Pro 16 will perform high-quality interlacing. If "No interlace processing" is set, then it is assumed that the source material contains full frames.

For more information on interlacing, please see "[Interlace](#)

".

### **Tempo/Pitch** ([audio](#)

objects only)

If there is information about the tempo, then the tempo can be doubled or halved here. The tempo can be detected using [Tempo and beat recognition](#)

.

Keyboard shortcut: Ctrl + E

# Text objects

In this section:

[Title Editor](#)

[Disable effects](#)

[Edit snap point](#)

[Load title template](#)

[Save as title template](#)

[Save as special effect](#)

[Convert to 3D title](#)

[Attach to picture position in the video](#)

[Border cropping adjustment:](#)

[Copying objects](#)

[Cut objects](#)

[Delete objects](#)

[Object properties](#)

## Title Editor



Opens the [title editor](#)

for the selected photo, video, or title object.

Keyboard shortcut: Ctrl + T

## **Disable effects**

All effects applied to the text will be deactivated.

## Edit snap point

If the position of objects, object borders, markers, or the playback marker is changed with the mouse, these will automatically spring to certain "key positions" if you get close enough to them. This functions as a "notch", i.e. even objects in a higher zoomed resolution can be precisely positioned, without any gaps, which you wouldn't normally see in that resolution. Normally, all object borders and all markers lock to one another.

- Per object, one additional snap point can now be placed within an object to mark positions where other objects should snap to. This is helpful if you want to show a title at a certain spot in a video object, for example.
- To set a snap point, select an object and place the playback marker at the position where you would like the snap point to be.
- Next, use "**Set snap point**" to set the point. Likewise, "**Delete snap point**" removes a snap point. As soon as you select the option "Set snap point" at another position it will be moved automatically.
- "**Delete all snap points**" deletes all snap points for all objects.

Keyboard shortcut: Alt + Shift + P



## Load title template

A [dialog](#)

for loading a title template will open.

## **Save as title template**

This allows you to create your own templates using your title creations. The function "Load title template" enables these templates to be used again quickly.

## **Save as special effect**

This function saves the title with all objects that have been [grouped](#) with the title object. This enables you to create title templates that contain all required overlay objects.

## **Convert to 3D title**

The title object will now be turned into a MAGIX 3D Maker object, and a limited version of MAGIX 3D Maker will open.

## **Attach to picture position in the video**

This can be used to attach the current video, [image](#), or (3D) text object to a movement path in another video object. Read more about this in the chapter "[Magnetic objects](#)".

## **Border cropping adjustment:**

Select this option if the edges are cropped during playback on your television. Values stored in "[Movie effects settings](#)" ("Effects" [menu](#)) will be applied.

## Copying objects



This function copies the selected [scene](#) (or the selected object in Timeline mode) to the [clipboard](#). You can then use the "Paste" command to place it into any [movie](#)

Keyboard shortcut: Ctrl + C

## Cut objects



This function deletes the selected [scene](#) (or the selected object in "Timeline" mode) and copies it to the [clipboard](#). You can then use the "Paste" command to copy it into any [movie](#)

Keyboard shortcut: Ctrl + X



## Delete objects



This function deletes the selected [scene](#) (or the selected object in "Timeline" mode).

Keyboard shortcut: Del

## Object properties

This function displays all of the information about the currently selected objects such as file name, position on the hard drive, tempo, etc. The object editor also defines the foreground and background color of every object in the arrangement. Depending on the type of object, the elements displayed will vary.

### General information

The name of the selected object and the fore/background color for the object in unselected status can be changed here. Additional information is also displayed about which file the selected object points to.

### [Interlace/Deinterlace](#)

(only for video objects)

The tab "Interlace/Deinterlace" lets you specify the interlace editing of the video material.

### **Interlace properties:** Normally, MAGIX [Movie](#)

Edit Pro 16 automatically makes suitable settings for this; however, if the video material is faulty, you may have to make some adjustments yourself. If playback of the exported movie is very jittery or if flickering occurs, or if some effects do not look how they should, you can reverse the source material frames.

### **Deinterlace options:** Normally, the setting "**Automatic interlace processing**

" does not have to be changed. The frames are processed separately and passed to the encoder when exported. If necessary, MAGIX Movie Edit Pro 16 will perform high-quality interlacing. If "No interlace processing" is set, then it is assumed that the source material contains full frames.

For more information on interlacing, please see "[Interlace](#)

".

### **Tempo/Pitch** ([audio](#)

objects only)

If there is information about the tempo, then the tempo can be doubled or halved here. The tempo can be detected using [Tempo and beat recognition](#)

.

Keyboard shortcut: Ctrl + E

# MAGIX 3D Maker objects

In this section:

[Edit settings...](#)

[Edit snap point](#)

[Create still frame](#)

[Audio cleaning](#)

[Motion](#)

[Section](#)

[Attach to picture position in the video](#)

[Interpolation for interlace material](#)

[Anti-flicker filter](#)

[Border cropping adjustment:](#)

[Background design](#)

[Video effects](#)

[Copying objects](#)

[Cut objects](#)

[Delete objects](#)

[Add time code](#)

[Object properties](#)

## **Edit settings...**

A limited MAGIX 3D Maker version is opened to edit the selected object.

## Edit snap point

If the position of objects, object borders, markers, or the playback marker is changed with the mouse, these will automatically spring to certain "key positions" if you get close enough to them. This functions as a "notch", i.e. even objects in a higher zoomed resolution can be precisely positioned, without any gaps, which you wouldn't normally see in that resolution. Normally, all object borders and all markers lock to one another.

- Per object, one additional snap point can now be placed within an object to mark positions where other objects should snap to. This is helpful if you want to show a title at a certain spot in a video object, for example.
- To set a snap point, select an object and place the playback marker at the position where you would like the snap point to be.
- Next, use "**Set snap point**" to set the point. Likewise, "**Delete snap point**" removes a snap point. As soon as you select the option "Set snap point" at another position it will be moved automatically.
- "**Delete all snap points**" deletes all snap points for all objects.

Keyboard shortcut: Alt + Shift + P

## Create still frame

MAGIX [Movie](#) Edit Pro 16 can create a still [frame](#) of an object at the position of the start marker.

## **Audio cleaning**

Please see "[Audio cleaning](#)" in the "[Audio effects](#)" chapter

Keyboard shortcut: Shift + W

## **Motion**

Lets you move video objects on the screen. See "Movement" in the "Video effects" chapter.



## **Section**

Places video objects in a particular part of the screen. Please read the "Video effects" chapter for more details.

## **Attach to picture position in the video**

This can be used to attach the current video, [image](#), or (3D) text object to a movement path in another video object. Read more about this in the chapter "[Magnetic objects](#)".

## **Interpolation for interlace material**

Choose this option to remove [interlace](#) artifacts from your video [image](#)

. If, for instance, you extract freeze frames from a video, ridge structures appear in sequences which feature movement.

## **Anti-flicker filter**

Choose this option for still pictures with detailed structures and high contrast. This filter reduces line flickering during TV playback.

## **Border cropping adjustment:**

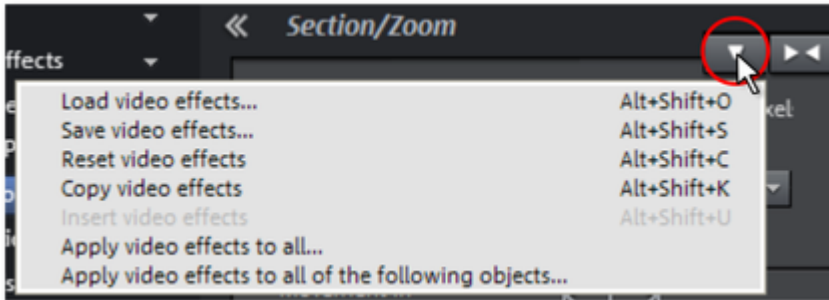
Select this option if the edges are cropped during playback on your television. Values stored in "[Movie effects settings](#)" ("Effects" [menu](#)) will be applied.

## **Background design**

Select a color, a picture, or any video on your [hard disk](#) which you would like to serve as the background for the photo displayed. This function is especially useful when photos have black bars around them, or if they are reduced in size.

## Video effects

The entries for this [submenu](#) are directly available in the Media Pool.



In this section:

[Load video effects](#)

[Save video effects](#)

[Reset video effects](#)

[Copy video effects](#)

[Insert video effects](#)

[Apply video effects to all](#)

[Apply video effects to all of the following](#)

### Load video effects

This command lets you load a saved effects combination for the currently selected object. If you have selected multiple objects, then the effects combination for each object will be applied.

Shortcut: Alt + Shift + O

### Save video effects

This command lets you save the current effects combination for each object separately.

Shortcut: Alt + Shift + S

### Reset video effects

This option allows you to deactivate all currently used effects entirely if you want to undo the changes.

Shortcut: Alt + Shift + C

### **Load video effects**

This command lets you load a saved effects combination for the currently selected object. If you have selected multiple objects, then the effects combination for each object will be applied.

Shortcut: Alt + Shift + O

### **Save video effects**

This command lets you save the current effects combination for each object separately.

Shortcut: Alt + Shift + S

### **Reset video effects**

This option allows you to deactivate all currently used effects entirely if you want to undo the changes.

Shortcut: Alt + Shift + C



## **Save video effects**

This command lets you save the current effects combination for each object separately.

Shortcut: Alt + Shift + S

## **Reset video effects**

This option allows you to deactivate all currently used effects entirely if you want to undo the changes.

Shortcut: Alt + Shift + C

## **Reset video effects**

This option allows you to deactivate all currently used effects entirely if you want to undo the changes.  
Shortcut: Alt + Shift + C

## **Copy video effects**

Effects settings for an object can be copied to the [clipboard](#) to [add](#) them to other objects.

## **Insert video effects**

Video effects can be added from other objects to the one selected. The settings must be [copied](#) to the [clipboard](#) beforehand to do so.

## **Apply video effects to all**

The current effects settings will be applied to all scenes and photos in your [movie](#)

## **Apply video effects to all of the following**

The current effects settings will be applied to all scenes and photos in your [movie](#) which lie behind the selected object.

## Copying objects



This function copies the selected [scene](#) (or the selected object in Timeline mode) to the [clipboard](#). You can then use the "Paste" command to place it into any [movie](#)

Keyboard shortcut: Ctrl + C

## Cut objects



This function deletes the selected [scene](#) (or the selected object in "Timeline" mode) and copies it to the [clipboard](#). You can then use the "Paste" command to copy it into any [movie](#)

Keyboard shortcut: Ctrl + X



## Delete objects



This function deletes the selected [scene](#) (or the selected object in "Timeline" mode).

Keyboard shortcut: Del

## Add time code

MAGIX [Movie](#) Edit Pro 16 can add a time or date ("timecode") to the picture material. To add a timecode, right click on the video object and choose the "Fade in date as title" option from the [context menu](#)

- If you're using a DV-[AVI](#) file (a digital recording from a camcorder, for instance), then the recording date will be used from the selected section.
- If you're using a different file, the creation date will be used as the timecode.

The title editor is then opened in order to customize the entry.

## Object properties

This function displays all of the information about the currently selected objects such as file name, position on the hard drive, tempo, etc. The object editor also defines the foreground and background color of every object in the arrangement. Depending on the type of object, the elements displayed will vary.

### General information

The name of the selected object and the fore/background color for the object in unselected status can be changed here. Additional information is also displayed about which file the selected object points to.

### [Interlace/Deinterlace](#)

(only for video objects)

The tab "Interlace/Deinterlace" lets you specify the interlace editing of the video material.

**Interlace properties:** Normally, MAGIX [Movie](#)

Edit Pro 16 automatically makes suitable settings for this; however, if the video material is faulty, you may have to make some adjustments yourself. If playback of the exported movie is very jittery or if flickering occurs, or if some effects do not look how they should, you can reverse the source material frames.

**Deinterlace options:** Normally, the setting "**Automatic interlace processing**

" does not have to be changed. The frames are processed separately and passed to the encoder when exported. If necessary, MAGIX Movie Edit Pro 16 will perform high-quality interlacing. If "No interlace processing" is set, then it is assumed that the source material contains full frames.

For more information on interlacing, please see "[Interlace](#)

".

**Tempo/Pitch** ([audio](#)

objects only)

If there is information about the tempo, then the tempo can be doubled or halved here. The tempo can be detected using [Tempo and beat recognition](#)

.

Keyboard shortcut: Ctrl + E

# Program settings

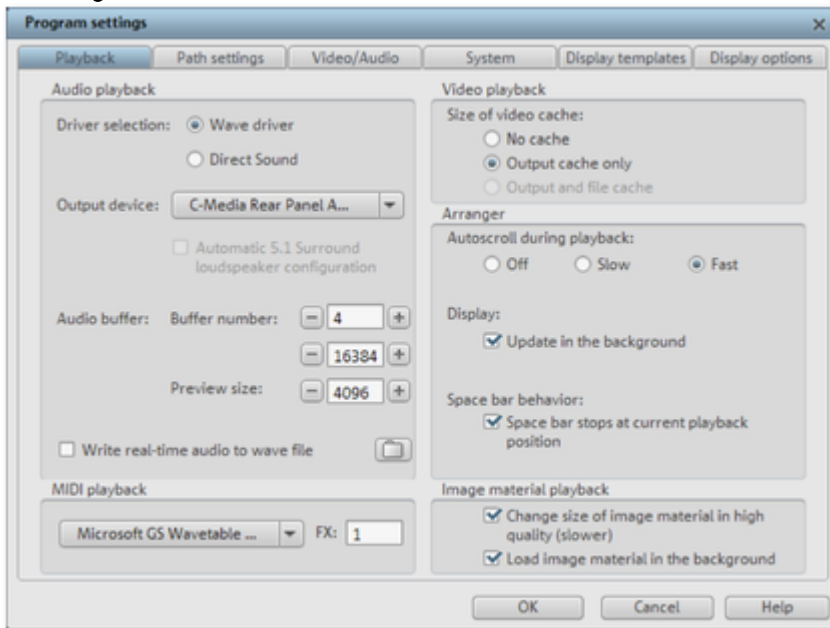


All basic settings for MAGIX [Movie](#)

Edit Pro 16 are made in this window. This allows you to influence the settings in MAGIX Movie Edit Pro 16 in detail.

Keyboard shortcut: P

# Play



## Audio playback

**Driver selection WAV/Direct Sound:** Here you can specify whether you wish to use the standard Windows driver for the sound card or the DirectSound driver. DirectSound has the advantage that the sound output (for all modern sound cards or onboard sound chips) can also be used by other programs open simultaneously. WAV drivers are recommended if the CPU load is higher, as the larger buffers allow better handling of the load peaks (otherwise this would cause crackling).

**Output device:** Use this option to specify which sound card plays the wave audio objects. This is especially important if you have multiple sound cards installed on your computer, e.g. "onboard sound" as well as an additional sound card.

**Audio buffer:** In order to allow smooth playback of a complex arrangement, MAGIX Movie Edit Pro 16 creates a RAM data buffer into which the current data is loaded. Therefore it is not the entire arrangement that is pre-processed; far more, processing occurs step-by-step.

### **Multi-track audio buffer/preview audio buffer:**

Here you can specify the size of the buffer that should be used for playback of the entire arrangement or for previewing waves in the file manager.

**Number of buffers:** Here you can specify how many buffers you want to use. More buffers increase the safety for crackle-free playback of the arrangement, but also increase the memory requirement. If played via Direct Sound (see Settings in the "Playback parameter" dialog), only one buffer is automatically used.

### **Note:**

If response and loading times are too slow, reduce the buffer size; otherwise increase the buffer size if the audio playback is choppy or if real-time errors occur. As error-free playback is usually more important than fast reaction times, the buffer size should be raised to 16384 or 32768 if dropouts occur. The possible number of buffer updates is between 2 and 10.

### **Write realtime audio to wave file:**

If this option is activated, the entire soundtrack can be mixed live and recorded simultaneously. During playback, for example, you can therefore control mixer fades and effects live. All realtime activities are recorded and saved in a separate WAV file.

## **[MIDI playback](#)**

With MIDI device you can specify which soundcard or which MIDI interface should be used for MIDI playback.

## **Video playback parameters**

### **Video [cache](#) size:**

The video cache ensures a smooth on-screen playback of files and effects by preloading them. The ideal setting depends on your system. It is best to experiment to see what results in the best playback performance.

## **Arranger**

### **Autoscroll during playback:**

If autoscroll is activated, the screen view automatically shifts when the playback cursor reaches the right edge of the screen, which is particularly useful for longer arrangements. You may select the size of the scrolling steps from either "Fast" (whole pages) or "Slow" (half pages).

### **Warning:**

Scrolling requires constant recalculation of the screen view, which may lead to interrupted playback if the amount of system RAM is too low. If this does happen, then you should deactivate autoscroll.

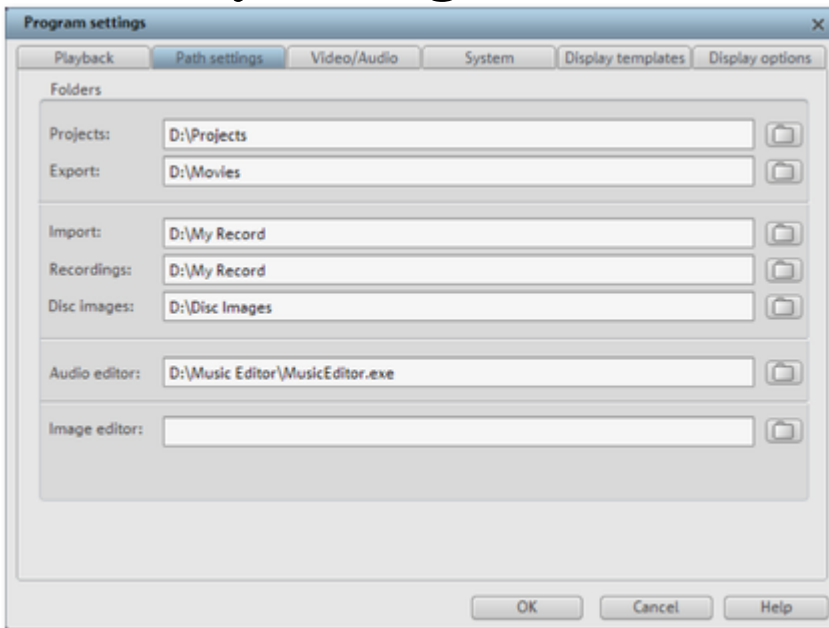
**Display:** Displaying objects in timeline mode allows you to simplify the performance enhancement. You can decide whether to display preview frames for video objects across the entire object, or just for the first and last frames. For audio objects you can hide the wave form display. This is particularly recommended for [MPEG](#) data streams.

### **Update in background:**

The update of the object display after move and zoom operations in the arranger is performed in the background in order to let you work smoothly.

**[Image playback:](#)** Resizing high-quality image material: You can use this feature to improve the quality when resizing, particularly downsizing to less than half of the original size as in picture-in-picture effects. This also requires more [CPU](#) power.

# Directory settings



Set the paths where

- the projects are saved
- imported and exported data and recordings are stored
- exported (Export) and imported (Import) files and recordings (Recordings) and virtual VCR recordings (TV recordings) are stored
- temporary files are stored (which are needed for regular operation)
- the EXE files for external [audio](#) and the [image editor](#) are located, which can be started via the context or effects [menu](#) (PLUS version only)

# Video/Audio

In this tab you will find all settings concerning video and [audio](#) files.

## Video standard

PAL is used in Europe, the US and Japan use NTSC.

## Movie display

The resolutions that can be set here concern only the picture display in the Arranger. If playback becomes jerky, we recommend entering a lower value. The quality of exported videos is not influenced by this.

**Automatic [interlace processing](#):** MAGIX Movie Edit Pro 16 normally detects whether the loaded video files were recorded with the interlace or progressive processes automatically, and half-[image](#) format is detected for interlaced movies. In case automatic detection fails, you can deactivate it here and set the [object properties](#) of video objects to the correct process.

## Video options

**Extract sound from video:** If a video file contains video and audio data the audio track of the video will also be imported if this option is activated. It will be displayed as an audio object in the arrangement below the video object. Both are automatically grouped together. If the audio track has to be edited or replaced later, you first have to ungroup it ("Ungroup" [button](#) in the tool bar or via the "Edit" [menu](#) ).

### **Allow user-defined names for sound extracted from VOBs:**

Specifies whether a warning will be displayed for each imported file during VOB import (VTS\_01\_1.vob) allowing you to enter a name for your movie (check box "checked") or whether you would like an automatically generated name to be assigned (check box "unchecked").

**Automatically copy exported material to [clipboard](#):** This option is particularly useful when used with other programs, such as Microsoft Powerpoint. If activated, a multimedia file you have just created is immediately copied to the [clipboard](#) and can be used in other applications. For instance, you can insert it into an opened MS Powerpoint template by pressing "Ctrl + V".

### **Adjust 4:3 aspect ratio to screen:**

This option automatically customizes photos that have an approximate 4:3 aspect ratio to the television's 4:3 picture. The pictures are therefore easily stretched or compressed. This inevitably brings about distortions in the picture. If this option is deactivated, black bars appear to the sides.

### **Automatically preview exported clips**

: This option starts the clip immediately after exporting for verification.

### **Automatically load/save picture effects from [JPX file](#)**

: If you have edited pictures using another MAGIX program (e.g. MAGIX Digital Photo Maker), then a .jpx description file is saved along with the image which contains information about effects editing and texts. This option adds that information into your editing process.

### **Use picture effects when exporting to MAGIX Online Services**

: If this option is selected, all the picture effects are included with the sent file.

**[Hardware acceleration for 3D effects](#):** Here you can (de)activate hardware acceleration of your graphics card for 3D effects. You can find more information about this topic in the [3D fades](#) chapter.

**Automatically create frametable during importing:** Sometimes, rebuilding a [frame](#) table can get rid of



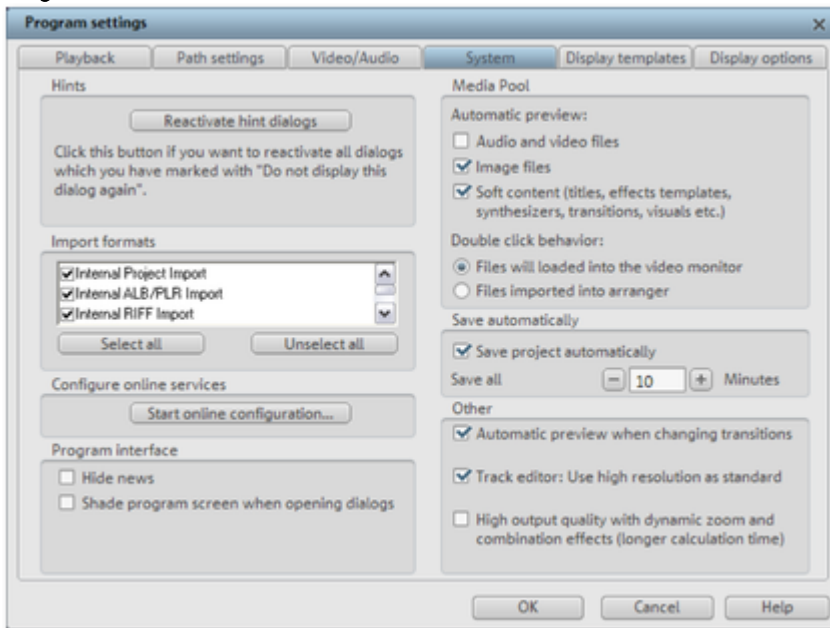
problems in certain [MPEG](#) files. For example, such problems can be present if the navigation (positioning of the playback marker, transport) is bumpy or doesn't function at all.

Normally, when loading MPEG video, a frame table is not created in order to speed up the loading process. If you do create one anyway, MPEG files are normally noticeably faster and easier to edit.

**Reduce bitmap resolution for preview:**

The resolution of image files is reduced during playback to decrease required memory. This requires less computing power than playback in full resolution; full resolution is always calculated during export.

# System



**Dialogs:** In its newly installed state, MAGIX [Movie](#) Edit Pro 16 displays a number of security queries in various parts of the program. Each one can be switched off by clicking the small box at the bottom that says "Don't show this message again". To display these warning messages select the **Reactivate dialogs** option.

**Import formats:** You can unselect file formats that you never use, and these will no longer be imported. Please keep in mind that for some file types ([AVI](#), [WMA](#)) several import modules exist, and MAGIX Movie Edit Pro 16 uses the fastest one in each case. If you experience problems during the import of certain files, you can experiment with deactivation of certain import modules, forcing the program to use the slower, but more [compatible](#) import module.

**Start file preview for...:**

Unselects automatic file preview start for Media Pool files and certain file types.

**Still [frame](#) duration:**

Specifies how long a still frame will be shown normally during BMP or JPEG file import. For single frame sequence import select the duration of 1 frame.

**Save interval:**

The interval at which autosave projects will be periodically saved.

**Layout:** Determines whether MAGIX Movie Edit Pro 16 should start with the **Import** or the **Edit** interface.

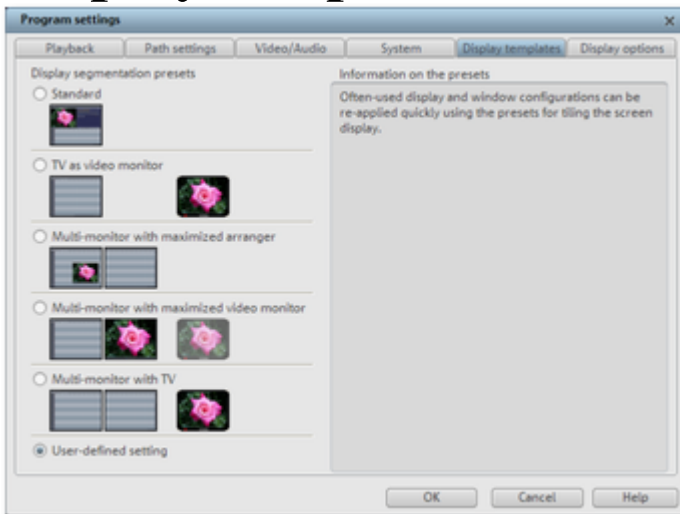
**Automatic preview during transition switch:**

If this option is activated a short preview of the transition effect will be quickly played between two photos when you select a new transition.

**Use Title Editor with high resolution as default:**

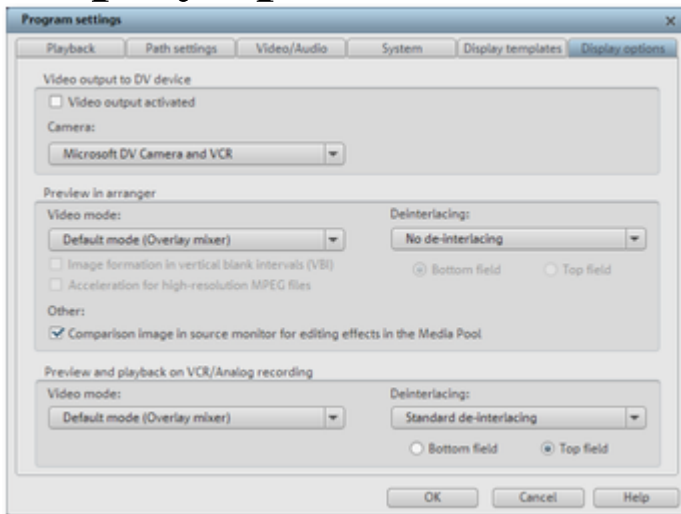
The Title Editor is used in high resolution by default. The representation of titles is improved, but this also results in a longer loading time for movies.

# Display templates



These presets provide a collection of useful configurations for display on the monitor. On systems with only a single connected monitor, only the first two are practical. The presets are explained on the right side of the [dialog](#). All window properties of the arranger, program monitor, etc. can still be changed manually after the application of a preset.

# Display options



## Video output to DV device

**Video output on a DV device:** This option displays your arranger view on your TV via your DV camera. This is useful if your graphics card doesn't have a TV output. However, since your PC must then compress the video signal in real time in DV-[AVI](#)

format and in addition to processing all real-time effects, so you need to have a powerful PC for jitter-free playback. Even if your computer is not particularly powerful, you can still use this function to see how your video looks on your TV screen, since the analog video output signal of a good DV camera is better than the TV output of an average graphics card.

## Playback in the Arranger/Preview and playback in video recorder

You can set the playback mode separately for the arranger (including all preview windows and effect dialogs), and the preview monitors during recording and in the video recorder.

## Video mode

### Standard playback (video for windows):

This is the standard mode that functions on all systems.

### Direct 3D ([hardware mixer](#)):

This mode provides an extreme increase in speed by letting the mixing, many effects, and various transitions be calculated directly on the graphics card. Depending on the graphics card, performance can increase by 300%. The graphics card will not be used during export.

**Note:** To use this mode the graphics card must possess at least 128 MB own memory. You will need to install Direct 3D 9 or higher, and the graphics card driver must support "High Level Pixel Shader Language 2.0". [MAGIX Movie](#)

Edit Pro 16 checks the corresponding properties when this mode is selected, and switches it off if necessary.

**Standard mode (overlay mixer):** In this mode you can use a hardware-like de-interlacing for the output on your PC screen or progressive scan-capable projector. Playback of recordings with [interlace](#) turns out much better.

**Alternative mode (video mixing renderer 9):** This mode uses the hardware de-interlacing function of modern graphics cards together with DirectX 9. Make sure that you are using the most recent version of

your graphics card driver, which must be [compatible](#) with DirectX 9 to function properly. This mode works better than the standard mode (overlay mixer) only for a few graphics card models.

## **Image formation in Vertical Blank Intervals (VBI)**

The [image](#) formation takes place in the vertical blank intervals of the monitor signal (or the connected TV signal). This helps avoid image interruptions. Warning: Because of the necessary waiting time on the next VBI, this process adds significant computation time! You can deactivate this option for digital displays such as TFT monitors. In "Overlay" mode, [image](#) formation occurs exclusively via VBI.

## **Acceleration for high-resolution MPEG2 files**

This option can be selected only in the "[Hardware](#) acceleration (Direct 3D)" video mode and indicates that videos in [MPEG](#)-2 format will be processed directly from the graphics card GPU. Depending on the graphics card performance, an improvement of up to 300% can be achieved!

## **De-interlacing**

In the DirectShow modes "Overlay mixer" and "Video mixing renderer 9", you can activate [hardware](#) de-interlacing with your graphics card. For general information on de-interlacing and the options "Top/Bottom [field](#) first", please read the corresponding article "[De-interlacing](#)".

# Problems and solutions

In this chapter

[File will not load](#)

[Choppy or uneven playback](#)

[Problems and Remedies regarding the Auto Remix Assistant](#)

[Activation problems](#)

# File will not load

If files cannot be loaded, this means that the format is either not supported by MAGIX [Movie Edit Pro 16](#) and the corresponding codec must first be activated. Read the section "[Import formats](#)" or "[Activate additional functions](#)".

In case of [AVI](#) files, it is possible that the necessary codec is not installed. For more, please refer to "[General tips for AVI videos](#)" in the appendix "Digital video and storage devices".

## **Tip**

: To find out which codecs are used in the movie file, different help programs are available. An example for this is "GSpot" or "AVIcodec".

# Choppy or uneven playback

Don't panic if the picture on your screen is choppy or uneven. The finished product will look perfect and play smoothly. Don't forget that MAGIX [Movie](#)

Edit Pro 16 calculates all effects in real time. This lets you see for yourself what sort of influence each of the effects will have on your video footage. Some effects make even today's high-performance PCs work quite hard, and often, a steady, continuous video stream is simply not possible on your PC. The final product, free from previous choppiness, is only available after rendering it to DVD or exporting it. For that reason, you should first edit the movie in its raw version without effects. The preview generally delivers a steady picture, allowing you to work quickly and quietly. Towards the end, you can add effects to your movies to give them a special touch of Hollywood!



# Problems and Remedies regarding the Auto Remix Assistant

**Problem:**

The playback stutters, the metronome is suspended, the computer is overloaded... (on older computers.)

**Remedy:** We recommend changing to [wave](#) drivers ("P" key, "Playback parameter" [dialog](#)) instead of DirectSound.

**Problem:**

The metronome does not work and there are no lines on the the wave-shaped display.

**Probable cause:**

The material does not contain beats or the song contains a passage without beats.

**Remedy:**

The song should be limited in such a way that only rhythmic passages are contained.

**Possible 2nd reason:**

Inaccurate tapping or a false BPM value has been entered.

**Remedy:**

Try the tempo correction buttons or tap until the "locked" condition is attained.

**Problem:** The metronome sounds inaccurately or is jerky, the lines in the [wave](#)-shaped display are irregular and thinly drawn.

# Activation problems

## **Problem:**

The entered code is incorrect (telephone activation)

Make sure your entry is correct; in most cases a typo is to blame.

If the code is entered correctly, dial the number of our Call Center. Our coworkers will gladly help you.

## **The MAGIX website won't open**

Check your Internet connection; you may have to use manual dial-up.

## **The form for ordering via post/fax won't open**

- Check that an adequate text editing program is installed and activated (for example, MS Word).

## **I still haven't received an email with the activation code**

- Check that your inbox isn't full.
- Have a look in your spam folder.

You can always send questions via email to our support whenever you like. Please have the following information at hand so that we can assist you as quickly and as specifically as possible.

- Complete product name
- Exact version number (to be found in the about box in the "About" [menu](#) item of the "Help" menu)
- Encoder/Decoder name
- Your user code (accessible via the "Activate via post/fax" [dialog](#))

**Problem:** I installed my MAGIX program onto my new computer or built a new [hard disk](#) (sound card, memory...) into my old computer. Now my activation code is no longer accepted.

Activation is linked to a specific computer. Changes to the computer's [hardware](#), for example, integrating a larger hard disk can lead to the computer no longer being recognized as the one for which the activation code has been calculated. This will most likely happen if you install MAGIX [Movie](#) Edit Pro 16 on a new computer. If this is the case, simply request a new activation code. Since you're already registered as a MAGIX customer, you won't have to pay for another activation.

**Online:** When registering on the MAGIX website use your existing MAGIX login details.

## **Post/fax:**

Print out the order form again and send it to the address or fax number stated.

# Online functions

In this chapter

[Integrated browser](#)

[MAGIX News Center](#)

[Online](#)

[Embed Flash videos into your own web page](#)

# Integrated browser

The integrated [browser](#) offers many useful functions that help you collect material for using in your [project](#)

. All kinds of media can be collected ? images, videos, sound or simply text can be all integrated using the built-in browser with great results.

**Tip:** You must have an Internet connection to use the full range of options offered by the integrated [browser](#)

## Open browser



The integrated [browser](#) is opened by clicking on the "Internet media" [button](#) in the Media Pool (see Media).

## Navigation in the browser



**One page back:**

Switches to the previous page.



**One page forward:** Switches back to the page before the "One page back" [button](#) was pressed.



**Stop:**

Stops loading the selected page.



**Reload:**

The current page will be reloaded.



**Home:**

Returns to the home page.

In the address header, next to the navigation buttons, you can simply enter an Internet address like <http://www.magix.com>. Press the enter [button](#) and the corresponding page will be loaded.

## Loading Internet media

The buttons described here are used to collect and load media directly from the Internet into the current film. The corresponding functions can be found in the [context menu](#) of the [browser](#)



**Save selected text:** The selected text will be saved. It can then be edited using the [title editor](#)



**Start screen capture:** Opens the capture [dialog](#) for starting screen capture.



**Download selected images:**

The selected images will be saved to your computer.



### **Import screen capture of the opened Internet page:**

The loaded Internet page will be saved as an [image](#) file.



### **Start [audio](#) recording:**

A dialog for audio recording opens.

#### **Hint:**

For recording from the Internet, it is important that the sound card is selected as the sound source.

## **Accept media after download**

This option makes sure that the downloaded media are loaded into the current [movie](#) right away.

## **Define the path for saving Internet media.**

To define the path for saving Internet media, simply click on the folder symbol and navigate to the desired folder. Confirm your selection with OK.



D:\Eigene Dateien\MAGIX downloads

Apply media after download

## Open browser



The integrated [browser](#) is opened by clicking on the "Internet media" [button](#) in the Media Pool (see Media).

## Navigation in the browser



**One page back:**  
Switches to the previous page.



**One page forward:** Switches back to the page before the "One page back" [button](#) was pressed.



**Stop:**  
Stops loading the selected page.



**Reload:**  
The current page will be reloaded.



**Home:**  
Returns to the home page.

In the address header, next to the navigation buttons, you can simply enter an Internet address like <http://www.magix.com>. Press the enter [button](#) and the corresponding page will be loaded.

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**Start screen capture:** Opens the capture [dialog](#) for starting screen capture.



**Download selected images:**  
The selected images will be saved to your computer.



**Import screen capture of the opened Internet page:**  
The loaded Internet page will be saved as an [image](#) file.



**Start [audio](#) recording:**  
A dialog for audio recording opens.

**Hint:**

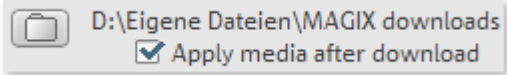
For recording from the Internet, it is important that the sound card is selected as the sound source.

## Accept media after download

This option makes sure that the downloaded media are loaded into the current [movie](#) right away.

## Define the path for saving Internet media.

To define the path for saving Internet media, simply click on the folder symbol and navigate to the desired folder. Confirm your selection with OK.



## Navigation in the browser

**One page back:**

Switches to the previous page.

**One page forward:** Switches back to the page before the

"One page back" [button](#)

was pressed.

**Stop:**

Stops loading the selected page.

**Reload:**

The current page will be reloaded.

**Home:**

Returns to the home page.

In the address header, next to the navigation buttons, you can simply enter an Internet address like <http://www.magix.com>. Press the enter [button](#) and the corresponding page will be loaded.

## Loading Internet media

The buttons described here are used to collect and load media directly from the Internet into the current film. The corresponding functions can be found in the [context menu](#) of the [browser](#)



**Save selected text:** The selected text will be saved. It can then be edited using the [title editor](#)



**Start screen capture:** Opens the capture [dialog](#) for starting screen capture.

**Download selected images:**

The selected images will be saved to your computer.

**Import screen capture of the opened Internet page:**

The loaded Internet page will be saved as an [image](#) file.

**Start [audio](#) recording:**

A dialog for audio recording opens.

**Hint:**

For recording from the Internet, it is important that the sound card is selected as the sound source.

## Accept media after download

This option makes sure that the downloaded media are loaded into the current [movie](#) right away.

## Define the path for saving Internet media.

To define the path for saving Internet media, simply click on the folder symbol and navigate to the desired folder. Confirm your selection with OK.



D:\Eigene Dateien\MAGIX downloads

Apply media after download



## Loading Internet media

The buttons described here are used to collect and load media directly from the Internet into the current film. The corresponding functions can be found in the [context menu](#) of the [browser](#)



**Save selected text:** The selected text will be saved. It can then be edited using the [title editor](#)



**Start screen capture:** Opens the capture [dialog](#) for starting screen capture.



**Download selected images:**  
The selected images will be saved to your computer.



**Import screen capture of the opened Internet page:**  
The loaded Internet page will be saved as an [image](#) file.



**Start [audio](#) recording:**  
A dialog for audio recording opens.

**Hint:**

For recording from the Internet, it is important that the sound card is selected as the sound source.

## Accept media after download

This option makes sure that the downloaded media are loaded into the current [movie](#) right away.

## Define the path for saving Internet media.

To define the path for saving Internet media, simply click on the folder symbol and navigate to the desired folder. Confirm your selection with OK.

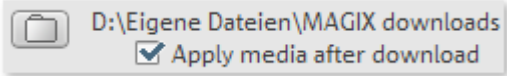


D:\Eigene Dateien\MAGIX downloads

Apply media after download

## Define the path for saving Internet media.

To define the path for saving Internet media, simply click on the folder symbol and navigate to the desired folder. Confirm your selection with OK.



# MAGIX News Center



MAGIX can supply you with all of the latest information about your [software](#)

. In the MAGIX News Center, you will find all of the links to current online tutorials as well as tips & tricks on individual topics or software application examples.

You will also be informed of the availability of brand new updates and patches for your program as well as special offers, contests, and surveys.

The news is split into three color-coded sections:

- Green for practical tips & tricks for your software
- Yellow reports the availability of new patches and updates for your product
- Red for special offers, contests, and surveys
- And if there are no new messages, then the [button](#) will be grey

All available information is shown as soon as you click on MAGIX News Center. If you click on one of the news items you will be forwarded to the corresponding website.

# Online

MAGIX Online World offers a wide range of online services for digital photography, video, music, media backup/security, and connecting desktop PCs with mobile handsets and the web.

For more information, please go to the [menu](#)

Online > MAGIX Online World overview or surf to the MAGIX Online World website.

In this section:

[Catooh – the Online Content Library](#)

[MAGIX Online Album](#)

[MAGIX Online Print Service](#)

[magix.info](#)

[More online services](#)

[MAGIX Screenshare](#)

[Online login details](#)

## Catooh – the Online Content Library

Catooh provides you with high-quality photos, videos, and music for every theme, expanded by intelligent iContent with professional Soundpools, DVD [menu](#) templates, and brilliant MAGIX ShowMaker styles to help you make your photo, video, and music projects reality. All of this is available directly from your MAGIX [software](#)

Just choose "Online" from the menu "Catooh" to set up an Internet connection.

Browse through the thematically sorted categories or view the results directly by entering a keyword.

After downloading, you can drag the objects from the Media Pool directly into your arrangement.

**Tip:** Read the [introduction online](#)

!

### Import media backup

iContent (for example, 3D transitions) which you buy and download from Catooh is stored directly in your central **My files\MAGIX Downloads\Backup** directory. If you have downloaded these files from other MAGIX programs, then you can use the command "Import media backup" to make them accessible for use in MAGIX [Movie](#)

Edit Pro 16.

## MAGIX Online Album

Impress your friends and family in minutes with your own photos and videos as your own your personal photo & video website: [http](http://first_name.last_name.magix.net)

://first\_name.last\_name.magix.net.

MAGIX Online Album lets you put your favorite photos online directly from within MAGIX products like MAGIX [Movie](#)

Edit Pro 16, or mobile phones with built-in cameras, and then send a link to them to your friends via email. All photos are immediately available from anywhere in the world on a professionally-designed photo website, in well-organized photo galleries, as full-screen slideshows, or in the form of a personal photo e-card.

- Personalized album website in many designs,
- unique Internet address ([URL](#)),
- upload your pictures directly from a camera phone, send the link, and share the picture with other camera phone users,
- full-screen online slideshows with fade effects and music,
- send individual designer e-cards with your own photos,
- Share your photos with friends, including address management and password protection for private albums.

MAGIX Online Album is available in three versions, of which the smallest (the FREE album with 500 MB webspace for your photos) is entirely free.

The larger versions (CLASSIC or PREMIUM) are available for a monthly charge, but also come with many handy features, such as a faster website, 2 GB or 5 GB storage space, more website designs or access by mobile phone/PDA. More information about prices and features is available at

<http://www.magix-photos.com>

### Upload images from slideshow

1. Select still [image](#) and place the start marker at the position of the image which you want to upload from your slideshow.
2. Then, select "Online -> MAGIX Online Album -> **Load image from slideshows**" in the [menu](#).

In order to upload photos to your **MAGIX Online Album**, simply log in using your email address. Naturally, access is protected via your personal password. If you still don't have a password, click on "**Register now**

".

Using your **MAGIX Online Media Manager**

, you can quickly manage your photo website, upload photos and music, create new albums, add designs and text, and much more.

Using "**Upload movie as video**

" you can present your slideshow with fades, music, and all other effects as a playable video in the Internet.

1. Design your slideshow.
2. Save your movies, and then under "<Service\_name\_OFA>" select "Online -> Upload slideshow as video".

Now you just have to follow the instructions on the screen to finish the upload process.

**Upload slideshow as [audio](#)**

: With this option, you can present only the audio of your slideshow in your online album.

1. Design your slideshow.
2. Save your movies, and then under "<Service\_name\_OFA>" select "Online -> Upload audio from slideshow".

Now you just have to follow the instructions on the screen to finish the upload process.

The following options are also available:

**Send e-cards and photo emails**

Send your photos as unique ecards with great designs or as a photo email to your friends and family.

**Order photo prints and gifts**

Order paper prints or great photo gifts from MAGIX Online Album and have them delivered directly to your home, or pick them up from a photo lab in your area. Delivery time is usually just 2 - 3 days. More about [MAGIX Online Print Service](#)

[You can also read the FAQ \(frequently asked questions\) on the Internet.](#)

## MAGIX Online Print Service

MAGIX Online Print Service lets you order paper prints and photo gifts (t-shirts, mugs, etc.) directly from within MAGIX programs such as MAGIX [Movie Edit Pro 16](#) or via [www.magix.com](http://www.magix.com). Upload your photos with a click and have the developed photos delivered to your home within days.



### Order photo prints and gifts

Order real paper prints or great photo gifts straight from your MAGIX Online Album and have them delivered directly to your home or pick them up (no shipping costs) from your nearest photo developer. Delivery usually takes 2 - 3 days.

More about [MAGIX Online Print Service](#)

- Order your valuable digital photos in impressive quality on premium photo paper from a digital photo printing specialist
- Brilliant prints on premium photo paper in all formats
- Impressive picture quality; true-to-color for up to 100 years
- Huge selection of great photo gifts (t-shirts, mugs, calendars, and much more)
- Includes MAGIX Photo Manager for conveniently ordering your photos
- Real prints and great photo gifts of your digital pictures ? it's that easy

### 1. Select photos

Take your time and select your favorite photos from the program and optimize them for best results. Remove redeye, enhance colors and contrast, and much more. All offline and on your PC!

Then simply select MAGIX Online Print Service from the "Online" [menu](#) and "Send selected".

### 2. Select format and quantity

Now select the desired number and the [image](#) format (e.g. 10x15) or photo gift (mug, t-shirt). Do you have a voucher? Then click on "Use voucher" and enter your voucher code.

### 3. Specify zoom

One great option is the crop function for your prints. To use it click on the [button](#) "Edit photo". Here you can set the format (small 2:3 or digital 3:4) you would like for your photos. You can see how your photo prints will look in the preview window. Using the selection [frame](#) you can crop your photos individually.

### 4. Submit order

Once you have made all your settings click on the "Submit order" [button](#). Now all you have to do is enter your details and the type of delivery. Your order will now be dispatched online.

You will now receive an order confirmation by email including a link where you can find up-to-date information about your order anytime.

**Delivery straight to your doorstep**



Have your prints and photo gifts conveniently delivered straight to your doorstep or pick them up from a photo retailer close to you to save postage. Orders usually take 2-3 days.

## **magix.info**

### **Share your knowledge & get answers**

This MAGIX service offers you and the MAGIX Community at large a central platform for exchanging knowledge, photos, videos, and music, for discussing and evaluating, for communicating with one another, for presenting yourself, and networking with other members.



You will find the sections "Questions & Answers", "Show & Discuss", "Online Training", and "Chat" where you can play an active or passive role in the MAGIX Community. For this there's not only the [www.magix.info](http://www.magix.info) portal, but magix.info directly in your product.

### **Ask questions online**

If you have questions or problems with your MAGIX program or you're looking for tips & tricks concerning multimedia, then you're at the right place.

### **Display all questions & answers...**

Use the questions which other community members have asked and the collective knowledge of the answers to improve your own working methods, to solve problems, and to get to know the details of MAGIX [Movie](#)

Edit Pro 16.

### **Launch the online training center**

Learn not only theoretically, but also practically what the program is capable of: "learning by doing", quickly and uncomplicated.

### **Let your friends view the contents of your MAGIX.info screen over the Internet on their PCs.**

Ideal for viewing photos and videos together or for receiving support for questions arising during your creative workflow while using the program (a licensed client will be installed for this purpose).

## **More online services**

## MAGIX Website Maker

Not only is Internet surfing easy! Thanks to MAGIX Website Maker creating websites also becomes child's play!

### This service offers:

- Your desired **domain** ([www.desiredname.com](http://www.desiredname.com)) and a subdomain (<http://your-name.magix.net/website>).
- 250 MB memory space with 5 email accounts, 1 GB each.
- Website Maker with website templates, intros. Also animations, text effects, form and design objects, picture and graphic templates, and buttons. And everything without any ad banners!
- Photo (\*.jpeg), video (\*.wmv) & music (\*.mp3) options.
- Additional **software**: MAGIX web mail for managing your email inbox.

MAGIX Website Maker offers 3 months of free, non-binding service. This way, you have enough time to find out everything about MAGIX Website Maker and all existing possibilities for editing and managing your homepage.

### MAGIX Website Maker offers everything for the perfect Flash® website:

- **Design templates**: Numerous high-quality website templates in the latest professional Flash® design with pre-finished, customizable subpages, start pages, profile pages, photo pages, video pages, and much more.
- **Text & text effects**: Freely positionable text fields with fantastic fonts and animated text effects can be added and individually formatted with ease.
- **Multimedia content**: Select your favorite photos, spectacular slideshows, videos and an online video player with your own background music, or integrate it all as an online music player with playlists.
- **Decorative elements**: Attractive design objects, plenty of vector shapes, background images, buttons, and much more offer more possibilities for designing unique websites than ever.
- **Animation objects**: Large selection of dynamic, impressive animation objects for breathtaking, moving websites.
- **Links**: Easily add links to your own or external websites.
- **Top extras**: Enhance your website with a visitor counter, guest book, contact form, and many other useful extras.

### Export function

: Conveniently add individual components of your website (e.g. video player, slideshow, online music player) or even the entire website to external sites as an embedded website.

### Proceed as follows:

After registering your desired domain, you can start creating your website right away.

1. First, select a design for your website in MAGIX Website Maker
2. If you would like to place an [intro](#) (start animation) at the start of your domain, select your intro as a next step.
3. Now you can replace the mock text with your own text as you see fit. All free-standing elements on all webpages can also be moved as you please. To do so, click to select the element and move it using your mouse.
4. Once everything is just how you want it, you can put your page online, so that your domain can be accessed.

## MAGIX Blog Service

With MAGIX Blog Service, YOU make the news! Share your thoughts, experiences, and news with a worldwide audience in no time using your own interactive online multimedia journal. Invite family, friends, and acquaintances to join in and enter their comments! A free MAGIX Online Album belongs to the MAGIX Blog Service so that you always have full control over your contributions.

[You can also read the FAQ \(frequently asked questions\) on the Internet.](#)

## **MAGIX Podcast Service**

Podcasts are quickly becoming the medium of choice, since everyone who can record [audio](#) files (music, readings, radio plays, and news) and put them online can now also offer them as podcasts. Since podcasts are not webstreams (like webradio), but are rather offered as downloads, radio stations, newspapers, and magazine companies often use them to provide their broadcasts as repeats in podcast form. New releases from record labels and, most of all, ones from purely Internet-based labels can also be listened to as podcasts.

Check out the podcast directory that MAGIX has compiled: Audio recordings for every area of interest in many languages are available as a one-time trial or as a subscription.

More about this topic can be found under MAGIX Podcast Service.

## <Service\_name\_MMS>

No wishes remain unfulfilled with this service!

**Manage music online:** The soundtrack of your life with you all of the time! MAGIX makes all of your favorite songs available to you all of the time ? forget carrying your record boxes. Simply upload songs, manage them online, and play them with an integrated [MP3](#) player. Wherever you go, your music is already there!

### **Buy music**

: A musical shopping experience, around the clock: Download hits, oldies, and rarities comfortably from home and enjoy them anywhere. The free MAGIX Music Manager gives you an overview of all of your music and devices. Select songs with the original cover art from an especially large offer of high-quality MP3 songs!

### **Download music samples**

: Complete your own multimedia projects with high-quality sounds and styles from professionals! No matter whether you want loops, sounds, and instrumental parts for your arrangements, or a great voice for one of your own guitar recordings ? you're guaranteed to find the right sounds. New content every month ? excellent templates for individual ringtones with MAGIX Ringtone Maker.

### **Listen to podcasts online**

: The MAGIX Podcast Service automatically provides acoustic variation at home, on the go, or on mobile devices. Whether pirate stations, the storytelling hour, or a cookery show. Simply choose the station you want! You can use MAGIX music programs like MAGIX MP3 Maker to comfortably subscribe to, download, manage, and burn podcasts from all over the world.

### **Download sound templates for your own ringtones**

: Ringtones not only let you show others who you are, but what you like: In the MAGIX Online Content Library, you can download professional sound templates for your own creations, individually edit them, then transfer them directly to your mobile. You're guaranteed to be the only one with these ringtones!

### **Create ringtones with your mobile**

: A music studio in your pocket ? MAGIX Mobile Music Maker turns your mobile into a DJ booth! Compose and remix ringtones easier than ever before: Select the style, add effects, mix down, and your unique ringtone is finished! Groove together now in multi-player mode via Bluetooth!

## MAGIX Screenshare

This function makes it possible for you to offer assistance to other users directly via the Internet, or to get help from others. To do this you have to register MAGIX [Movie](#)

Edit Pro 16 first.

### Hint:

To inform the screensharing guests of exactly what is being shown, it is also a good idea to telephone or chat simultaneously.

### Register as host for a screen transfer

1. If you want to start a screenshare instance yourself, then you have to register as a host first. To do this open the [menu](#) "Online" and then select "Screen transfer as host...".
2. In the [dialog](#) you can enter a name for the screen session. Your user account name is used here by default.
3. Now click on "start session". A small window will now open in the bottom right corner which displays the status of your screen session. A number will also be displayed (session ID) which serves as a password for your guests.
4. Start the screenshare instance.

### Register as guest of a screen session

1. You have to register as a guest to view a screensharing instance. To do this open the [menu](#) "Online" and then select "Screen transfer as guest...".
2. Enter the password you received from your host (8-digit session ID).
3. Now click on "start session". A window will open displaying a smaller version of your host's screen.



## Online login details

In this [dialog](#)

, you can save your login information (login and password) for MAGIX Online Album and all other MAGIX Online World as well as for Catooh, making it unnecessary to login each time you access MAGIX Online World.

The saved data are valid for all other MAGIX programs for the corresponding computer user.

# Embed Flash videos into your own web page

To do this, you will need a basic knowledge of HTML pages and all technical requirements for uploading your files to your web page.

Tip: If you do not have HTML skills, we recommend using [MAGIX Online Album](#)

. Without any previous knowledge, you can present videos, photos and music on your own web page ? all completely for free. Videos from MAGIX Online Album can also be embedded in other websites as well.

Please note that a Flash video cannot be directly embedded into an HTML page like a picture in JPEG format. For a Flash video, you will need a Flash player embedded in the website to play back your video.

MAGIX offers you a download package with some Flash player goodies. It can be downloaded [here](#)

The package contains the following files:

- standalone\_omk.swf - the Flash player
- demo.html - a sample website, which demonstrated how the player can be used
- demo.flv - a demo video, which will be played by the Flash player on the demo website

To reach your target quickly, simply adjust the demo website to your own requirements and replace the demo video with your own. At the end, upload all three files to your website.

If you need more information about the website's HTML code, we recommend that you read an explanation of HTML documentation to better understand the structure and functions of HTML.

If you understand HTML code, you will find another explanation of various parameters using which you can influence the appearance and function of the Flash player.

<a href="#">url</a>	The path to the video which is to be played back.
preview	The path to an <a href="#">image</a> in JPEG format. It is displayed as a preview in stopped state before the video is played back.
sound	The sound contained in the video will be played back if this parameter is "true".
loop	The video will be automatically played back from the start after reaching the end if this parameter is "true".
tooltip	Changing the position of the position cursor will display a tooltip with position information if this parameter is "true".
swfborder	A limiting line will be drawn around the player if this parameter is true.
autoplay	The video will be played back automatically when the page or the player are loaded.

# Keyboard shortcuts

In this chapter

[Playback functions](#)

[Arranger view](#)

[Move view](#)

[Transport control in Media pool](#)

[Mouse modes](#)

["File" menu](#)

[Edit menu](#)

[Effects menu](#)

[Window menu](#)

[Help](#)

[Edit keyboard shortcut](#)

# Playback functions

Start/Stop	Space bar
Transport buttons	J / K / L
In/Out points for punch recording	I/O
Stop (playback marker is stopped at the current position)	K
Restart beginning at playback marker	Backwards
Playback marker back to the beginning	Home
Playback marker to end	End
1 <a href="#">frame</a> back	Left arrow
1 frame forward	Right arrow
5 frames back	Ctrl + left arrow
5 frames forward	Ctrl + right arrow
Fast forward	Shift + right arrow
Fast rewind	Shift + left arrow
Set <a href="#">project</a> marker	Shift + 1/2/3

# Arranger view

Zoom in	Ctrl + up cursor key
Zoom out	Ctrl + down cursor key
Full screen playback	Alt + Enter
<a href="#">Movie</a>	Shift + A
overview	
Optimize view	Shift + B
Zoom 1 <a href="#">frame</a>	Ctrl + 1/2
/ 5 frames	
Zoom 1s / 5s / 1min/ 10min	Ctrl + 3/4/5/6
Zoom between red area markers	Ctrl + 7
Entire movie	Ctrl + 8

# Move view

To next object edge	Ctrl + 0
To previous object edge	Ctrl + 9
To <a href="#">movie</a> start	Home
To movie end	End
To beginning of section	Ctrl + Home
To end of section	Ctrl + End
Page to right/left	PgDn/PgUp
Grid unit right/left	Ctrl + PgUp/PgDn
To <a href="#">project</a> markers 1-10	1/2/3/4/5/6/7/8/9/0
To next/ previous project marker	Ctrl + Shift + PgDn/PgUp
To next/ previous <a href="#">scene</a> marker	Shift + PgDn/PgUp
To next/ previous chapter marker	Alt + PgDn/PgUp
To next/previous ad marker	Ctrl + Shift + W Ctrl + Alt + W
Scroll to left/right marker	Alt + Home/Alt + End
To next/previous empty section	Shift + 4/Shift + 5

# Transport control in Media pool

Set InPoint	I
Set OutPoint	O
Go to InPoint	Shift + I
Go to OutPoint	Shift + O
Play from InPoint to OutPoint	Ctrl + K
Save Take	Shift + T
Apply range to <a href="#">movie</a>	Ctrl + P

# Mouse modes

Intelligent mouse mode	Alt + 1
Mouse mode for individual objects	Alt + 2
Curve mouse mode	Alt + 3
Object stretch mouse mode	Alt + 4
Preview <a href="#">audio</a> objects	Alt + 5
Scrub mouse mode	Alt + 6
Context help	Alt + 7



## "File" menu

New <a href="#">movie</a>	Ctrl + N
Open movie	Shift + O
Save movie	Ctrl + S
Save movie as	Shift + S
Close movie	Ctrl + F4

## Load/Save project

Load [project](#)

Save project

Save project as...

Clean-up wizard

Ctrl+Shift+O

Ctrl+?+S

Ctrl + Shift + D

Ctrl + Alt + G

## Export movie

Export as <a href="#">AVI</a>	Alt + A
Export as DV AVI	Alt + B
Export <a href="#">movie</a> as an <a href="#">MPEG</a>	Alt + C
Video as MAGIX video	Alt + D
Video as QuickTime Movie	Alt + E
Windows Media Export	Alt + F11
Real Media export	Show quantization grid Alt + G
Video as MPEG 4 video...	Alt + K
<a href="#">Audio</a> as <a href="#">WAV</a>	Alt + H
Uncompressed movie	Alt + U
Movie as sequence of individual pictures	Alt + V
Single <a href="#">frame</a> as BMP file	Alt + M
Single frame as JPEG	Alt + N

# Internet

Send [movie](#)  
as email  
Internet connection

Shift + U

Ctrl + W

Burn CD/DVD

Alt + Shift + R

[Audio](#)  
/ Video recording  
Audio recording

G

R

## Twain scanner

Select Source	Alt + Q
Scan	Alt + Shift + Q
Read tracks from <a href="#">audio</a> CD	C
Play Audio/Video	H
Slideshow Maker	Ctrl + Shift + M
Soundtrack Maker	W

## Backup copy

Copy <a href="#">movie</a> and media into folder	Shift + R
Copy <a href="#">project</a> , movie, and media into folder	Ctrl + Q
Burn movie and media to CD/DVD	Ctrl + Shift + R
Burn project, all movies, and media	Ctrl + Shift + Q
<a href="#">Restore disc project</a> from (S)VCD/video DVD	Ctrl + Shift + P
Load backup film	Alt + O
Slideshow Maker	Ctrl + Shift + M
MAGIX Soundtrack Maker	W
Movie properties	E
Program settings	Y
Exit	Alt + F4

# Edit menu

Undo	Ctrl + Z
<a href="#">Restore</a>	Ctrl + Y
Cut objects	Ctrl + X
Copy objects	Ctrl + C
Paste objects	Ctrl + V
Duplicate objects	Ctrl + D
Deleting objects	Del
Select all objects	Ctrl + A
<b>Cut</b>	
Split <a href="#">scene</a>	T
Delete scene start	D
Delete scene end	U
Remove scene	Ctrl + Delete
Split <a href="#">movie</a>	Alt + W
Adjust music to section	Ctrl + Shift + U
<b>Edit range</b>	
Cut section	Ctrl + Alt + X
Copy section	Ctrl + Alt + C
Delete range	Ctrl + Delete
Insert section	Ctrl + Alt + V
Extract section	Ctrl + Alt + P
Group objects	Ctrl + L
Ungroup objects	Ctrl + M
Mix <a href="#">audio</a>	Shift + M
Set snap point	Shift + Alt + P
Set <a href="#">project</a> marker	Shift + 1/2/3/4/5/6/7/8/9/0
Set chapter markers	Shift + Enter
Set chapter markers automatically	Alt + Shift + Enter
Delete chapter markers	Ctrl + Enter
Delete all chapter markers	Alt + Ctrl + Enter
<b>Move view</b>	see " <a href="#">Move view</a> "

# Effects menu

Master effects

Ctrl + B

## Video object effects

[Scene](#)

Shift + Z

recognition

[Image](#)

Shift + K

stabilization

Find and remove ads

Shift + C

Edit bitmap externally

Alt + P

## **Movement**

Pan left -> right

Pan right -> left

Pan up -> down

Pan down -> up

Zoom out

Zoom in

[Restore](#)

movement

Ctrl + Shift + A

Ctrl + Shift + B

Ctrl + Shift + Y

Ctrl + Shift + Z

Ctrl + Shift + X

Ctrl + Shift + F

Ctrl + Shift + G



## Cropping

Zoom 2	Ctrl + Alt + 4
Zoom 3	Ctrl + Alt + 5
Free zoom selection	Ctrl + Alt + 6
Fix picture proportions	Ctrl + Alt + 7
<a href="#">Restore</a> selection	Ctrl + Alt + 8
Load <a href="#">movie</a> effects	Ctrl + Shift + O
Save movie effects	Ctrl + Shift + S
Restore movie effects	Shift + C

## Audio object effects

Normalize	Shift + N
Automatic track damping	Shift + L
<a href="#">Audio</a>	Shift + W
Cleaning	
Echo/Hall	Shift + H
Timestretch/Resample	Shift + Q
Surround Editor	Ctrl + Shift + N
Load/Save settings	Ctrl + Alt + Shift + J/K
Load audio effects	Ctrl + Alt + O
Save audio effects	Ctrl + Alt + S
<a href="#">Restore</a>	Shift + Alt + K
audio effects	
Tempo Recognition Wizard	Shift + E
Externally edit <a href="#">Wave</a>	Alt + Z
Volume curve	Alt + X
Object properties	Ctrl + E

# Window menu

Edit trimmer	N
Object trimmer	Q
Mixer	M
Master <a href="#">audio</a> effects rack	B
Video monitor	V
Media Pool	F
Reset window arrangement	F9
Display settings	Alt + Shift + V
Switch to next window	Tab
Film overview	Shift + A
Optimize view	Shift + B
Zoom horizontally/vertically	see " <a href="#">Arranger view</a> "

# Help

Help

Context help

Show tool tips

System information

F1

Alt + F1

Ctrl + Shift + F1

Ctrl + I

# Edit keyboard shortcut

In this [dialog](#) you can specify keyboard shortcuts for all [menu](#) function of MAGIX [Movie](#) Edit Pro 16. This allows you to adapt existing shortcuts to your requirements or to add new ones. The settings are automatically saved in a file upon closing the program, i.e. they will be available the next time the program is used.

The display of the entire [menu](#) tree is the key function of MAGIX [Movie](#) Edit Pro 16.

## Add keyboard shortcut

To add a keyboard shortcut, proceed as follows:

- Look for the required [menu](#) point and select it with a simple mouse click. Under "Current menu point" the currently selected menu point will be displayed.
- Then, click on the "New keyboard shortcut" [field](#).
- Type in the keyboard shortcut. You can also use combinations of any key with "Shift", "Alt", and "Ctrl".
- Then click on "Assign shortcut". If the shortcut should already have been assigned a corresponding warning will be displayed.

**Note!** Please do not use the space bar, "Esc", or "Insert" key ("0" in the number block), since the functions of these keys are permanently assigned in MAGIX [Movie](#) Edit Pro 16 and can not be changed.

## Keyboard shortcut list

### Reset:

Activates all preset shortcuts again.

### Load:

Previously saved shortcuts are loaded and activated again.

### Tip: MAGIX [Movie](#)

Edit Pro 16 offers additional presets for those switching over from other programs. This significantly simplifies getting used to MAGIX Movie Edit Pro 16!

### Note!

The current settings will be overwritten during loading! Save your current keyboard shortcuts in advance if you would like to keep them.

### Save:

The current keyboard shortcuts can be saved after naming the file appropriately.

**List:** This [button](#) opens a window where a complete list of current keyboard shortcuts appears. The included "Copy" [button](#) can be used to copy this list to the Windows [clipboard](#) and then edit and print it using a text editor.

# Activate additional functions

You can activate encoders/decoders for various file formats as required. The corresponding activation [dialog](#) will appear automatically when the codec is used for the first time, e.g. when a DVD is burned and the [MPEG](#)

-2 codec is used.

## Why does it have to be "activated"?

To import (decode) or export (encode) certain video and [audio](#) formats, you will require a specific codec. MAGIX [Movie](#) Edit Pro 16 will ask you if you want to activate the codec as soon as you need it. The integration of decoders and encoders from third parties into programs usually costs money. These codecs are integrated via additional, voluntary activation in MAGIX programs which, according to usage and degree of prevalence, can be free or fee-based for special high-quality codecs. This way, MAGIX can continue to be able to provide you with optimum value for money for your [software](#)

In this chapter

[Free activation \(MPEG-2, MPEG-4, Dolby Digital 2.0 & 5.1\)](#)

# Free activation (MPEG-2, MPEG-4, Dolby Digital 2.0 & 5.1)

To be able to use [MPEG-2](#), MPEG-4, the [Dolby Digital stereo import](#), and Dolby Digital 5.1, you will have to activate the codec for free.

Activation can be done online via telephone or via post/fax. The quickest and easiest way to order an activation code is via the Internet.

## Order activation code online

Click on "Order online..." ([Field 1](#)). MAGIX [Movie](#)

Edit Pro 16 will automatically contact the MAGIX server and load the corresponding codec.

## Note

: Activation of the codec checks the registration data as required. Activation of the codec only functions if your version of the program has already been registered in your name. If you haven't registered MAGIX Movie Edit Pro 16, then you can do this at any time.

If your computer has no Internet access, you have the following options for activation:

## Order activation code in MAGIX Service Center

Use this option to conduct activation from a different computer which has Internet access.

## Order activation code via post/fax

After clicking on "Order via post/fax" (field 2), your user code will appear. This automatically assigns your personal activation code to your PC. Click on "Continue to order form" to transfer your user code automatically to the post/fax form. Now send the completed form as a print out to the address/fax no. mentioned. Your activation code will be sent to you in just a few days via post or fax. It can also be sent by mail if an email address is stated.

## Enter activation code

After receiving your personal activation code use the export or burn function to reopen the activation [dialog](#) for the corresponding file format. Type or copy the activation code into the input field in the [dialog](#) and click on "Activate..."

# Annex: Digital Video and Data Storage

In this chapter

[Video Editing on the PC](#)

[MPEG Compression](#)

[General notes on AVI videos](#)

[Overview of the different disc types](#)



# Video Editing on the PC

Digital video processing with the PC is comparable to [audio](#) processing. The analog medium that is video must first be digitized before it can be processed by the computer.

Digital video processing functions quite similar to recording via a sound card. The signal flow is measured in very short, regular intervals, and the values resulting from it can then be processed by the computer. The accuracy of each individual measurement results in the resolution, and the frequency of the measurements results in the [frame](#) rate. The more precise and frequent the signal is measured, the higher the quality of the digitized video, but also the higher demands on the capture performance and the required storage space. The Windows standard format for video files is [AVI](#) (audio and video Interleaved).

Digitizing video adopts either the camera or the graphics card, a TV card (e.g. Miro PCTV), or a video card (e.g. Fast AV Master). However, video handling makes much higher demands upon the [hardware](#) if good [image](#) quality is required. In order to be able to reasonably process video files on today's PCs, they must be compressed. Digital [audio](#), on the other hand only uses compression for saving storage space.

# MPEG Compression

[MPEG](#) means "Moving Picture Experts Group" and defines a workgroup which cooperates with the International Standards Organization (ISO) as well as the international Electro Technical Commission (ETC) to develop standards for video and [audio](#) coding.

Generally, the graphic data rate of the digital video standard is 167 megabits per second, which, when not compressed, requires a far higher storage capacity than a DVD can offer. A one-sided DVD 5 with 4.7 GB storage capacity is enough for 4 Minutes. For this reason, the available pictorial material must be effectively compressed ? a function which is achieved with the MPEG procedure.

This procedure is based on the simple fact that up to 96% of digital video data consists of repetition and can be compressed without visible degradation of the pictorial quality.

Each MPEG compression is, however, a data reduction and as such connected with information loss. If the video consists of very extensive details, or if the content changes very fast, then the picture may blur (dependent on the strength of the compression and the quality of the encoder).

Errors can also result from so-called compression artifacts such as small color defects or images that are too dark.

At average compression rates under 3 megabits per second it is probable that you will notice reduced quality. At rates around 6 megabit per second the degradation in quality becomes almost invisible.

## General notes on AVI videos

The [AVI](#) format (Audio Video Interleaved) isn't actually a proper video format! Rather, it is a so-called "container", where the conventions for transferring [audio](#) and video files to the program are only loosely defined. The codec (**coder/dec**

oder) actually defines what storage format is used. A codec compresses audio/video data into its own unique format which can only be read by the codec itself and is decoded when the film is played.

In concrete terms, a computer-generated AVI file **can only**

be loaded by and played on a different computer if the same codec is installed on it.

Many codecs (e.g. Intel Indeo®

video) have now become standard components of the Windows™ installation. Others like the popular DivX codec are not standard. If you are generating an AVI file for future play on another computer using one of these codecs, you should first install this codec on the other PC. The best method available is to copy the codec installer to your export directory and burn it every time you create a video disc (slideshow disc) for play on computers.

You may encounter some problems when using older video editing cards with codecs which only function with the card's [hardware](#). Such AVIs can **only**

be used on the computer which was used to create them. Try to avoid using this kind of codec.

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be used on the computer which was used to create them. Try to avoid using this kind of codec.

# Overview of the different disc types

MAGIX [Movie](#) Edit Pro 16 contains many [disc types](#) depending on whether you want to burn a movie or slideshow and which disc type you are using (CD or DVD), or the type of playback device or quality required.

The table below will explain which disc types can be best employed in different cases, the differences in quality, and how much storage space each format requires.

For further information please read the chapters on the individual [disc types](#)

Disc type	Media	<a href="#">Menu</a>	Quality	ca. length	Suitable for	Playback on
<a href="#">VCD</a>	CD	Yes	*	approx. 70 minutes	<a href="#">Movie</a>	DVD player on TV
<a href="#">S-VCD</a>	CD	Yes	**	ca. 30-70 minutes	Movie photos	DVD player on TV
<a href="#">DVD</a>	DVD	Yes, advanced	***	approx. 2 hours	Movie photos	DVD player on TV
<a href="#">miniDVD</a>	CD	Yes	***	ca. 20 minutes	Movie photos	DVD player on TV
JPEG DISC	CD DVD	No	****	Depends on original images and DVD player*	Photos	DVD player on TV without sound, effects or transitions
Slideshow	CD DVD	No	****	Depending on original images and DVD player	17 photos	Every PC with some effects, or as a backup
WMV HD	CD DVD	Yes	****	3 hours / DVD 30 min /CD	Movie photos	PC from Windows Media Player 9 format
Multi Disc	CD DVD	Yes	****	45 min/ DVD 7min/CD	Movie photos	PC from Windows Media 9 format + DVD player

\* The display duration for some DVD players may be set in this menu. The number of photos that can be

burned onto a CD or DVD depends on the sizes of the picture files.

You can also use the menu templates from the category "TV Showtime DVD" for the [disc types](#) mini DVD and DVD. Each picture of a slideshow is then displayed in fullscreen on its own [menu](#) page without having to playback the slideshow.

# Digital Versatile Disc (DVD)

## Quality

The exceptional color quality, [image](#) definition, and contrast of the DVD format are all well known.

A resolution of 720 x 576 (PAL) and coded using [MPEG](#)

-2, 25 pictures per second produces very good results. The quantity of data is approx. 5 times as much as a VCD.

## DVD size

DVDs look similar to CDs. The only visible difference is that double-sided DVDs have no label. Otherwise, both formats have the same dimensions.

- Diameter: 12 cm, like a normal CD (there are also DVDs with a diameter of only 8 cm)
- Thickness: 1.2 mm, just like a normal CD

## DVD media (overview)

The DVD does not differ outwardly from a conventional CD-ROM. Higher memory density (up to 17 GB as opposed to 650-780 megabytes) results from the fact that information is stored more densely (double-capacity) and that up to four layers can be used. In order to be able to read the information, a special laser with modified wavelength is required. Therefore, DVDs cannot be read using conventional CD-ROM drives.

## Writable disc formats

The recordable DVD market is split for the time being into three types: DVD-RAM, DVD+RW and DVD-RW.

**DVD-R:** Once-only writable medium. The DVD-R can be specified with the file structures of DVD Video, DVD [Audio](#), or DVD-ROM.

### DVD+RW

: Re-recordable DVDs can be created using +RW drives and can be read by almost any commercial DVD-ROM or DVD player. The companies involved are mainly Philips, Sony, HEWLETT PACKARD (as well as Ricoh, Yamaha, and Mitsubishi).

**DVD-RW:** Writable and erasable DVD technology is promoted by Pioneer and Sharp. This format was developed by the Pioneer company and should be [compatible](#) with existing DVD players.

### DVD-RAM:

This standard is not recommended due to small storage capacity and incompatibility with DVD players.

Note: MAGIX [Movie](#)

Edit Pro 16 supports DVD -R, DVD+R, DVD +RW, DVD -RW, but not DVD-RAM!

### Blank discs:

Single-sided recordable blanks with a capacity of 4.7 GB and a playback time of approx. 2 hours serve as storage media for all DVD burning formats at present.

## Copy Protection

**Macrovision (APS):** The [movie](#)

industry claims that even DVD-ROM drives and decoders or diagram cards with composite outputs or s-video outputs must support the Macrovision analog copy protection (APS). Only some older DVD players do not possess APS.

APS adds additional signals to a DVD's stored graphical data. The data is almost unchanged. These supplementary signals disturb the synchronization and the automatic recording regulation of most video recorders to prevent recording of the video. They are not noticeable on the television or the monitor, however.

**Content Scrambling System (CSS):** CSS prevents saving and duplication of DVD video tracks to [hard disk](#). The VOB streams of DVDs without CSS can otherwise (like other video files) be loaded via the Import Video [button](#)

There are further types of copy protection besides APS and CSS which ensure that retail DVDs cannot be copied without distortion

## Blu-ray Disc

Alongside HD-DVD, the Blu-ray Disc is viewed as the successor to DVDs and offers especially high storage capacity of up to 27 GB as a single-layer disc (double-layer up to 54 GB) with very few write errors.

The term Blu-ray Disc comes from the blue color of the laser. Because a color cannot be registered as a trademark, the letter "e" was removed from the word "blue".

The high storage capacity of the Blu-ray Disc suits high definition videos and slideshows in high quality perfectly, since these are characterized by large file sizes (depending on material approximately 40 MB/sec) and very high memory use.

### Hint:

A corresponding device is required for viewing Blu-ray Discs. To fully enjoy the benefits of high definition video, you should also use an HD-enabled TV.

Companies that were involved in developing Blu-ray technology have united themselves into the Blu-ray Disc Association (BDA).

### Blu-ray Discs come in three varieties:

- Only readable **BD ROM** (comparable to DVD video),
- rewritable **BD-RE** (comparable to DVD±RW or DVD RAM),
- and as a disc that can be written to only once **BD-R** (comparable to DVD±R).



## AVCHD disc

Use this command to create a high-resolution video. You can even burn Blu-ray (BD-R/RE) blanks as well as conventional DVD±R/RWs. In contrast to [Blu-ray Discs](#), MPEG-4/AVC codec is applied as the video format, which requires less memory at a comparable [image](#) quality. There is no disc [menu](#) on [AVCHD](#) discs.

### Tip

: To fully enjoy the benefits of high definition video, you should also use an HD-enabled TV.

### Compatibility

**AVCHD disc on Blu-ray:** Since this is a BD-conformant format, the disc created can be played back in any conventional Blu-ray player. Playback problems can almost always be traced to incompatibilities between Blu-ray blanks and Blu-ray players. In this case, consult the instructions for your Blu-ray player or ask the manufacturer which blanks are [compatible](#) with the device.

**AVCHD disc on DVD:** The DVDs created with AVCHD video are not supported by all Blu-ray players. The behavior of the devices is quite different. Normal DVD players cannot replay [AVCHD](#) discs, since the AVC format is not supported.

**Note:** To import and export AVC and [MPEG-4](#) files, the MPEG-4 codec must first be [activated](#). A [dialog](#) will open if the codec is required. Files with a horizontal resolution of more than 768 pixels can only be loaded in MAGIX [Movie](#) Edit Pro 16 Plus.

## Super Video CD (SVCD)

The [Super Video CD \(SVCD\)](#) is a technological advancement of the video CD. SVCDs are also like VCD-specified CD-ROMs which can be played using either a Super Video CD player (connected to the television), or directly with the CD-ROM drive of a computer. Many DVD players can also play SVCDs. [MPEG](#)

-2 and the increase of the data transfer rate makes it hard to tell videos from videos in DVD quality apart.

**Resolution:** SVCDs use the better MPEG-2 encoder in a standardized resolution of 480 x 576 (PAL). The MPEG-2 format offers a maximum resolution of up to 720 x 576 points and improved compression methods characterized by excellent [image](#) definition and homogeneity.

**Hard disk capacity:** An average 90-minute [movie](#) must be spread across 3 CDs. On one SVCD you can get about 30 minutes of good-quality movie.

### **Encoder setting:**

Compared to the VCD with 1.3, the data transfer rate is doubled to 2.6 Mbit/s.

MPEG-2 format introduces the so-called variable bit rate (VBR). In contrast to the constant bit rate (CBR) of the MPEG-1 encoders, this encoder has the option of using more bits for movement-intensive sections, as well as saving bits if picture content remains the same.

## Video CD (VCD)

Video CDs are specific CD-ROMs for storing videos in certain forms. Compression takes place using the [MPEG](#)

-1 codec. VCDs can be played on either a video CD player attached to a television or directly via the computer's CD-ROM drive. Most DVD players can play VCDs.

### **Resolution:**

VCDs can play movies with a maximum resolution of 352 x 288 pixels (PAL) or 352 x 240 (NTSC) at 25 pictures per second. The resolution of a VHS cassette offers for instance 300 x 360 pixels. More important than the resolution is the use of a good MPEG-1 encoder. Since video images constantly change, errors cannot always be perceived by the viewer.

### **Hard disk capacity:**

A VCD can store about 70 minutes of video. A typical motion picture must therefore be stored on two VCDs. In order to get as much video data on a normal CD as possible, one must forego correction information on VCD/SVCD formats within the individual sectors (sub-ranges) of a CD. You can therefore fit 720 MB of video data on a 650 MB blank CD. Due to improved burning and scanning technology it is now possible to burn up to 985 MB video data on a 99min blank CD.

**Encoder settings:** Normally the video CD data is played at a data rate of 1150 kBits video and 224 kBits [audio](#). By increasing the video bit rate to 3000kBits you can get the same resolution and a better-quality audio bit rate. Movement artifacts disappear almost completely at approx. 2000 kBits with the picture appearing a little less sharp. This pre-supposes, however, that the player can also play back such a bit rate. The fact that many DVD players can handle an increased data rate is due to well written player [software](#)

### **Experiment with higher data rates:**

If you do not need the full running time of the VCD, then you can experiment with space to improve the quality of the video!

## **miniDVD**

The miniDVD is nothing more than the DVD data format burned onto a CD-ROM. Thus the [MPEG-2](#) encoder and all other specifications of the DVD data format are used, and only the data carriers are different. Because the CD-ROM can only save about a sixth of the quantity of data a DVD can hold, the capacity of a miniDVD is accordingly limited to approx. 20 minutes of [movie](#).

MiniDVDs are particularly suitable for playing on the computer. For stand-alone devices they must be tested on an individual basis as to whether the device can handle the DVD format on a CD-ROM.

## JPEG disc

The "JPEG disc" is a special case for slideshows. No video file is created to be burned, but rather every photo in the [disc project](#) is exported individually with effects and burned to CD or DVD. Many modern DVD players can play JPEG files directly.

If a [project](#)

contains several slideshows, a subfolder will be created for each one, and the corresponding images will be placed into each one. This means that there are no menus, no sound, no animated effects or transitions ? although it does offer the best possible quality available for playback on TV. This means that there are no menus, sounds, animated effects or transitions, it does, however, offer the best possible quality available for TV playback.

## Slideshow disc



All slideshow [image](#) and [audio](#) files will be burned onto CD or DVD, together with any effect settings and the MAGIX Media Manager CDR player program.

A MAGIX Media Manager CD is designed especially for photo projects (slideshows). The original photos are burned onto CD;

Ideal for backing up valuable recordings. During playback on your PC, the highest possible picture quality is made possible. The following photo effects can be played by Media Manager.

- Brightness, contrast, gamma
- Cropping and rotation
- Title text (without text effects)

If your [project](#)

uses more effects, they won't be visible on the Media Manager CD. A VCD or DVD is more suitable for such projects.

The MAGIX Media Manager CDR ensures that the CD-ROM can be played back on any Windows PC regardless of the [software](#)

installed. The disc will automatically begin playing the slideshow after the CD-ROM has been inserted into the drive, provided the auto-play feature is enabled on your PC. To enable the auto-play feature on your PC, select the "Auto Insert Notification" option for your CD-ROM drive from the Windows Control Panel.

If deactivated, you can also start your CD-ROM slideshow manually:

1. Place your home-burned CD-ROM into your CD-ROM drive.
2. Open Explorer and click on the drive letter of the CD-ROM drive (usually D:\).
3. Double-click "MediaManager.exe" to start the MAGIX Media Manager CDR.
4. In the Explorer window of MAGIX Media Manager CDR, open the slideshow [playlist](#) file ending with \*.PLR and start the slideshow.

Additional information can be found in the help feature of MAGIX Media Manager CDR (F1 key).

## **WMV HD (Windows Media High Definition Disc)**

[WMV](#) WMV HD (Windows Media High Definition Disc) is a type of disc optimized for playback of slideshows on PC. The movies are converted into high-resolution Windows Media 9 format and a [menu](#) is added, like with DVDs. You must have Windows Media Player 9 or higher installed on your PC. Video encoding will be preset for [HDTV](#) resolution (1280 x 720, also known as "[720p](#)"). To select different resolutions, click on the [button](#)

"Encoder settings" and in "Presets" choose the following:

- Standard PAL (720x576) or NTSC (720 x 480)
- Standard PC resolutions (1024 x 768 or 1280 x 1024)
- [HDTV 720p](#) (1280x720) or 1080i (1920x1080)

## Multi Disc

A multidisc is a combination of different disc formats on one DVD. It consists of 3 parts and offers the following advantages:

- Maximum quality when played on a PC with WMV HD (Windows Media High Definition Disc)
- Fully [compatible](#) with DVD players due to a [DVD part \(Digital Versatile Disc\)](#)
- Greatest possible safety as a data backup of the [project](#) is added ([burn option](#)).



## Backup disc

Use this option to compile all movies in the current [disc project](#), including all connected media and burn them to disc.

Even larger projects can be burned straight to disc. The [project](#), if necessary, will be split up and burned automatically to multiple discs. A [restore](#) program which is burned to the first disc of such a backup, guarantees easy re-recording of the backup.

# MPEG-4 encoder settings

Behind [MPEG](#)

-4, you'll find a highly complex "academic" standard that operates and is supported variably according to make.

**Tip:** First, check if there is a suitable preset in the export [dialog](#) for your purposes. Before changes are made in "Advanced settings", the effects and interplay of the different parameters should be familiar.

The "**Advanced settings**" are divided into "Video", "[Audio](#)", and "Multiplexer".

Under "**Video**", there is a choice between "[MPEG-4](#)" (H.263) and "[AVC/H.264](#)"

". Depending on the purpose of application of the material to be exported, both of these encoder settings can be selected for compressing the video material. It is important in this case to know how the material will be played back.

Under "Audio", there is a choice between "[AMR](#)" and "[AAC](#)"

". The AMR format is more suitable for mobile devices that don't necessarily require high playback quality. AAC is more flexible, on the other hand, but it is supported by fewer mobile devices.

For material that is not exactly specific, encoder qualities recommend AVC [image](#) and AAC sound, since these encoders are equally suitable for all source material.

The option "Export as website" also creates an HTML page in an integrated Flash player that can play back the video created. Read the topic "[Embed Flash videos into your own web site](#)"

".

In this chapter

[MPEG-4](#)

[AVC / H.264](#)

[AMR](#)

[AAC](#)

[Multiplexer](#)

# MPEG-4

The [MPEG](#)

-4 (H.263) codec is especially useful for video material with little or only slower movements.

In this section:

[Generic](#)

[Bit rate control](#)

[Pixel aspect ratio](#)

[GOP structure](#)

[Input info](#)

[Statistics](#)

# Generic

## MPEG-4 preset

Different presets located within the encoder.

### (A)SP@L0-L5

: (Advanced) Simple Profile in Level 0-5

**(Q)CIF (Common Intermediate Format):** CIF is a video format produced as soon as 1990 with the video compression format H.261. At that time, the format was used for video telephone conferences. The "Q" in QCIF stands for "Quarter", and since resolution is halved in terms of height and width compared to CIF, the entire size is only a quarter of CIF.

QCIF was popular with mobile telephone manufacturers, since the resolution of 176 x 144 pixels was sensible for the first affordable SmartPhones (144 x 176).

**(Half)D1:** D1 corresponds with [MPEG](#)

-2 DVD. HalfD1 has exactly half of the entire number of pixels, meaning that the pixel number of the height and weight is 2/3 of D1.

### 720p:

Video stream with a resolution of 1280 x 720p (progressive).

**Apple iPod:** Apple iPod-[compatible](#) stream.

### Sony PSP

: Sony PSP-compatible stream.

## Profile/Level

So that profile and level are conformant with the other settings, pay attention to the minimum and maximum values in the following tables.

### Note!

In case the settings are not included in this information, problems playing back the encoded videos can lead to problems.

Table 1: The levels of the [MPEG](#)

-4 simple profile (SP)

Level	Typical visual session size	Max. number of objects	Maximum number of objects per type	Max. unique quant. tables	Max. VMV buffer size (MB)
L0	QCIF	1	1 x simple	1	198
L1	QCIF	4	4 x simple	1	198
L2	CIF	4	4 x simple	1	792
L3	CIF	4	4 x simple	1	792

Continuation of table 1

Level	Max. VCV buffer size (MB)	VCV decoder rate (MB/s)	Max. total VBV buffer size (units of 16384 bits)	Max. VOL VBV buffer size (units of 16384 bits)	Max. video packet length (bits)	Max. bitrate (kbit/s)

L0	99	1485	10	10	2048	64
L1	99	1485	10	10	2048	64
L2	396	5940	40	40	4096	128
L3	396	11880	40	40	8192	384

Table 2: The levels of the MPEG-4 advanced simple profile (ASP)

Level	Typical visual session size	Max. number of objects	Max. number per type	Max. unique quant. tables	Max. VMV buffer size (MB)	Max. VCV buffer size (MB)	VCV decoder rate (MB/s)
L0	176x144	1	1x AS or simple	1	297	99	2970
L1	176x144	4	4x AS or simple	1	297	99	2970
L2	352x288	4	4x AS or simple	1	1188	396	5940
L3	352x288	4	4x AS or simple	1	1188	396	11880
L4	352x576	4	4x AS or simple	1	2376	792	23760
L5	720x576	4	4x AS or simple	1	4860	1620	48600

Continuation of table 2

Level	Max. percentage of intra MBs with AC prediction in VCV buffer	Max total VBV buffer size (units of 16384 bits)	Max. VOL VBV buffer size (units of 16384 bits)	Max. video packet length (bits)	Max. bitrate (kbit/s)
L0	100	10	10	2048	128
L1	100	10	10	2048	128
L2	100	40	40	4096	384
L3	100	40	40	4096	768
L4	50	80	80	8192	3000
L5	25	112	112	16384	8000

## Picture type

"Picture type" specifies which parts of a [frame](#) should be used as the basis for the encoding:

- **Frame:** A frame is a single [image](#) from a video sequence, also called a full image.
- **Field:** A half-image, two of which combine to produce a frame. Read more about this explanation regarding "[Interlace](#)".

## Field order

**Note:** This parameter is only available if the setting "[Field](#)" is selected for "Picture type".

In case of interlaced streams, the half-[image](#) sequence is set. Read more about this explanation regarding "[Interlace](#)".

## Pulldown

**Note:** This parameter is only available if the setting "[Frame](#)" or "MBAFF" (only for AVC/H.264) is selected for "Picture type".

In normal cases, an [image](#) playback rate of 24 (or 23.976) frames per second is used; the NTSC system however requires 30 (or 29.97) frames/s, and there is a special algorithm for converting the video's frame rate. For compilations or test purposes, switch this option to "No". In normal cases, the setting can be set to "Auto".

## Slice count

A [frame](#) can be divided into multiple slices for encoding. Specify the maximum number of slices are permitted. If set to "0", then the number will be determined automatically.

## Bit rate control

The bit rate indicates how much data per second is saved in the video (playback speed). This makes the bit rate the deciding parameter for the video to be encoded.

### Mode

- **Constant bit rate:** The constant bit rate should only be used if the device used to play the video supports constant bit rates.
- **Variable bit rate:** The bit rate varies. For faster movements in the video, the bit rate increases, and for still images or slow pans, a lower bit rate is sufficient for creating the video in constant quality.
- **Constant quality:** Similar to the "Variable bit rate" mode, the bit rate varies according to the video material. The quality depends on the selected profile and can be changed.
- **Constant quantizer:** In this mode, a fixed colour quantization is used for the macro blocks. Under Advanced settings, a value between 1 and 32 can be set independent of the respective [frame \(I-Frame, P-Frame, or B-Frame\)](#). The higher the value, the stronger the quantization: small values produce qualitatively high-quality images and the data rate increases, and larger values produce a reduction in data, but the quality suffers.

### Bit rate (Bits/s)

- In "Constant bit rate" mode: Exactly those values entered are applied to be able to calculate the size of the video precisely.
- In "Variable bit rate" mode: The values entered here are applied to the video as an average as a guideline. The size of the video to be exported can only be approximated.

### Max. rate

This is the maximum bit rate that should be present in the video stream, i.e. maximum number of bits that may be transferred to the decoder.

#### Note

: This option is only available in "Variable bit rate" mode.

### VBV buf. size

VBV is the abbreviation for "Video rate buffer verifier definition" and the size of the buffer (storage area) that is applied to the encoding.

The larger the buffer is, the better the results will be, but the processing will also take much longer.

The smaller the buffer is, the more parallel processing can take place at the same time in RAM.

## Pixel aspect ratio

Specifies the page ratio of the individual [image](#) points (pixels).

### Meaning

: Different television norms and the standard pixel ratio. Select a setting and the results are displayed as "X" and "Y".

### X/Y

: The actual pixel ratio. If under "Meaning" the setting "Custom" is selected, then a custom ratio can be set.



# **GOP structure**

## **Max key interval**

Determines the maximum [GOP](#) length. High values mean improved compression. Lower values create stronger security protection and enable improved access to individual frames for processing the video.

## **B-frames count**

The number of [B-Frames](#). Several applications, e.g. video conferences, require a setting of "0" for this, i.e. no B-Frames, in order to enable the shortest possible reaction times for transfer.

## **Scene change detection**

If this option is activated the scenes will be detected during encoding, thus allowing you to insert an [I frame](#) after a [scene](#) change.

## **Input info**

Information about the incoming video stream is displayed here during live recordings.

## **Statistics**

Information about the encoder activity is displayed here during live recordings.

# AVC / H.264

The H.264/AVC codec is suitable for all types of material; however, it requires relatively higher [CPU](#) power for later decoding.

In the advanced encoder settings of the AVC encoder the "Generic" options in "Main Settings" are mainly interesting.

The AVC preset and video format can be adjusted here. For instance, if DVD quality is desired you should select "DVD". The video format should be selected specific to the country so that the material can be played on the devices most commonly available in these countries. For instance, you should select PAL for Germany, SECAM for France and NTSC for the US.

In this section:

[Generic](#)

[Bit rate control](#)

[Aspect ratio](#)

[GOP structure](#)

[Input info](#)

[Statistics](#)

# Generic

## AVC preset

This is where the actual video stream that will be exported is selected.

- **Baseline:** According to ISO/ICE 11172-1/2 standard
- **CIF:** Corresponds with [MPEG-1 VideoCD](#)
- **Main:** Corresponds with ISO/ICE 13818-1/2 standard
- **SVCD:** Corresponds with MPEG-2 Super VideoCD
- **D1:** Corresponds with MPEG-2 DVD
- **High:** HIGH profile 1920x1080i
- **DVD:** DVD video
- **HD DVD:** HD DVD video
- **Blu-ray:** Blu-ray Disc
- **Blu-ray HD:** Blu-ray Disc in high definition
- **Sony PSP:** Sony PSP-[compatible](#) format
- **HD 1280 x 720p:** High profile with a resolution 1280x720p (progressive)
- **HD 1440 x 1080i:** High profile with a resolution of 1440 x 1080i (interlaced)
- **Apple iPod:** Apple iPod-[compatible](#) stream.

## Video format

Specifies where the video to be exported should be. The encoder optimizes video material for the selected mode of playback.

- **Auto:** The format from the MAGIX [Movie Edit Pro 16 project](#).

**PAL:** Phase Alternating Line, or **PAL**

, is a process for color transmission for analog TV that is primarily used in Europe, but also in Australia, South America, and many African and Asian countries.

- The [image](#) repetition rate for PAL is 25 Hz.

**NTSC:** NTSC stands for "National Television Systems C

ommittee". This is a US institution that defined the first color carrier system for TV which is now used in most of America and some East Asian countries.

- The image repetition rate for NTSC is 29.97 Hz.
- **SECAM:** SECAM is a TV norm in France and eastern Europe for transferring analog color video signal.
- **MAC:** The MAC process (**M**ultiplexed **A**nalogue **C**omponents) involves TV norms developed for satellite TV. They have also been developed for an [HDTV](#) standard (HD-MAC).
- **Unspecified:** This setting does not make any special optimization.

**Tip:** The best results are achieved with the setting "Auto", since this automatically uses the [project](#) settings as a basis by MAGIX [Movie Edit Pro 16](#).

## Profiles

Defines which profile is applied in the AVC/H.264 stream.

- **Baseline profile:** The basis of applications with limited computing performance, especially for video conferences or videos on mobile telephones.
- **Main profile:** This profile was originally intended for the broadcast industry and for backup purposes. The process has however retreated somewhat from use, since "High Profile" has been developed for these purposes.
- **High profile:** This profile is used for broadcast and backup applications, and it is also used

sometimes in the [HDTV](#) industry (**H**igh **D**efinition **T**elevisi**o**n). For example, this profile for HD-DVD and Blu-ray Discs.

## Level

H.264 defines different levels. The higher the level, the larger the video's bit rate. In this table, you can see the maximum permitted values for the respective level in relation to the selected profile.

Level	Max. macro blocks per seconds	Max. <a href="#">image</a> size in macro blocks	Max. video bit rate (VCL) for baseline and main profile	Max. video bit rate (VCL) for high profile	Examples (Resolution / image rate in Hz)
1	1485	99	64	80	128 x 96/30.9
1.1	3000	396	192	240	176 x 144/30.3
1.2	6000	396	384	480	320 x 240/10
1.3	11880	396	768	960	320 x 240/36
2	11880	396	2 Mbit/s	2.5 Mbit/s	320 x 240/36
2.1	19800	792	4 Mbit/s	5 Mbit/s	352 x 480/30
2.2	20250	1620	4 Mbit/s	5 Mbit/s	352 x 576/25.6
3	40500	1620	10 Mbit/s	12.5 Mbit/s	720 x 480/30
3.1	108000	3600	14 Mbit/s	17.5 Mbit/s	1280 x 720/30
3.2	216000	5120	20 Mbit/s	25 Mbit/s	1280 x 1024/42.2
4	245760	8192	20 Mbit/s	25 Mbit/s	1920 x 1080/30.1 2048 x 1024/30
4.1	245760	8192	50 Mbit/s	62.5 Mbit/s	1920 x 1080/30.1 2048 x 1024/30
4.2	522240	8704	50 Mbit/s	62.5 Mbit/s	1920 x 1080/64 2048 x 1024/60
5	589824	22080	135 Mbit/s	168.75 Mbit/s	1920*1080/72.3 2048 x 1080/67.8 2560 x 1920/30.7
5.1	983040	36864	240 Mbit/s	300 Mbit/s	1920 x 1080/120.5 4096 x 2048/30

The setting "Level auto" specifies the encoder levels automatically, among other things for the resolution of the video format specified under "AVC preset" and the set profile bit rate. If a level is manually set in this case, then other parameter values may not exceed the permitted maximum values.

## Picture type

"Picture type" specifies which parts of a [frame](#) should be used as the basis for the encoding:

- **Frame:** A frame is a single [image](#) from a video sequence, also called a full image.
- **Field:** A half-image, two of which combine to produce a frame. Read more about this explanation regarding "[Interlace](#)".
- **MBAFF (macro block adaptive frame field):** A macro block consists of 16 x 16 pixels. The encoder creates a "[frame field](#)" on this basis for encoding.

### Field order

**Note:** This parameter is only available if the setting "[Field](#)" is selected for "Picture type".

In case of interlaced streams, the half-[image](#) sequence is set. Read more about this explanation regarding "[Interlace](#)".

### Pulldown

**Note:** This parameter is only available if the setting "[Frame](#)" or "MBAFF" (only for AVC/H.264) is selected for "Picture type".

In normal cases, an [image](#) playback rate of 24 (or 23.976) frames per second is used; the NTSC system however requires 30 (or 29.97) frames/s, and there is a special algorithm for converting the video's frame rate. For compilations or test purposes, switch this option to "No". In normal cases, the setting can be set to "Auto".

### Slice count

A [frame](#) can be divided into multiple slices for encoding. Specify the maximum number of slices are permitted. If set to "0", then the number will be determined automatically.

## Bit rate control

The bit rate indicates how much data per second is saved in the video (playback speed). This makes the bit rate the deciding parameter for the video to be encoded.

### Mode

- **Constant bit rate:** The constant bit rate should only be used if the device used to play the video supports constant bit rates.
- Constant quantizer:
- **Variable bit rate:** The bit rate varies. For faster movements in the video, the bit rate increases, and for still images or slow pans, a lower bit rate is sufficient for creating the video in constant quality.

### Pass

- **Single pass:** The encoder process takes place without prior analysis. This requires the least amount of time, however quality suffers.
- **Multi-pass analysis:** The first encoding is carried out at the same time as the analysis for the second encoding is calculated.
- **Multi-pass encode:** The first encoding is carried out at the same time as the analysis for the second encoding is calculated and updated. This produces the best results, but the process requires the most time.

### Bit rate (Bits/s)

- In "**Constant bit rate**" mode: Exactly those values entered are applied to be able to calculate the size of the video precisely.
- In "**Variable bit rate**" mode: The values entered here are applied to the video as an average as a guideline. The size of the video to be exported can only be approximated.

### HSS rate

This is the maximum bit rate that should be present in the video stream, i.e. maximum number of bits that may be transferred to the decoder.

#### Note

: This option is only available in "Variable bit rate" mode.

### CPB size

This sets the size of the "coded picture buffer" in bits. This is the buffer where the encoding is carried out. The larger the buffer is, the better the results will be, but the processing will also take much longer.

### Init delay (90 kHz)

[Image](#) and sound [offset](#)

is compensated as per the source material.

**Tip:** Detects asynchronicity that should be compensated directly in MAGIX [Movie](#) Edit Pro 16.

### Dest delay (90 kHz)

Certain mobile playback devices create an [offset](#) of [image](#)

and sound during playback, even if material is exactly synchronous. This option ensures that the device offsets the image for the value entered to counteract asynchronicity.

### Example of calculation



Suppose a device creates an offset of 13 ms, then the following calculation must be made:

$$13 \text{ ms} = 0,013 \text{ s}$$
$$0,013 \text{ s} \times \frac{90.000}{\text{s}} = \underline{\underline{1170}}$$

(Hz = 1/s)

**Note:** Only positive offsets are compensated, i.e. [image](#) comes after the matching sound.

## Aspect ratio

In the film industry, this is an indication of the ratio between width and height of a rectangle, monitor, or screen.

There are 3 different sizes available:

- **Picture Aspect Ratio** (also **Display Aspect Ratio, DAR**): This indicates the desired aspect ratio of the video to be exported. Here are some examples of typical aspect ratios: at home **4:3**, **16:9** (typical for TV sets) or **16:10** (widescreen-flatscreens, widescreen notebooks), **3:2** for 35mm films and photos. In cinemas you mostly find **1.85:1**.
- **Pixel Aspect Ratio (PAR, pixel aspect ratio)**: Indicates the aspect ratio of individual pixels. The majority of computer monitors have quadratic pixels (PAR=1:1), for analog television monitors (PAL at 4:3) **128:117**.
- **Sample Aspect Ratio (SAR, also Storage Aspect Ratio)**: Aspect ratio of the saved resolution (number of pixels), e.g. 720:576 at PAL. It also calculates picture aspect ratio and pixel aspect [ratio](#):  $SAR = DAR / PAR$ .

### Note

: In the standard case, the "Aspect ratio" remains set the way it is. You should only change the settings if the resulting video is exported distorted or stretched or if you need to correct the video because it is in the wrong aspect ratio.

# **GOP structure**

## **Max GOP length**

Determines the maximum [GOP](#) length. High values mean improved compression. Lower values create stronger security protection and enable improved access to individual frames for processing the video.

## **Max b-frames count**

The maximum number of [b-frames](#). Several cases of application, e.g. video conferences require "no b-frames" in order to achieve the shortest possible reaction times during transfer.

## **Scene change detection**

If this option is activated the scenes will be detected during encoding, thus allowing you to insert an [I frame](#) after a [scene](#) change.

## **Input info**

Information about the incoming video stream is displayed here during live recordings.

## **Statistics**

Information about the encoder activity is displayed here during live recordings.

# AMR

AMR involves a parametric codec with different data rates between 4.75 and 12.2 kbit/s. The 12.2-kbit/s settings throughly corresponds with the GSM-EFR codec in terms of algorithm and [audio](#) quality.

This audio format is used by mobile telephones for transferring the conversation and is optimized for encoding conversation (voices). Low bit rates provide compensation for mobile phones in case of transfer errors, i.e. bad reception. Depending on the signal strength, the compression increases or decreases to enable the best possible quality for a conversation. The AMR sound, on the other hand, encodes a fixed sample rate of 8,000 Hz compared to AAC sound.

The advanced AMR audio [menu](#) includes the following settings options:

The bit rate can be set between 4.75 and 12.2kbit/s. The higher the bit rate, the greater the file size and the higher level of audio quality. The standard settings provide a bit rate of 7.4 kbit/s. The highest bit rate for this format is more suited for transferring conversations.

# AAC

The AAC [audio](#) was developed by [MPEG](#), the Moving Picture Experts Group (Dolby, Fraunhofer Institut für Integrierte Schaltungen in Erlangen, AT&T, Nokia, Sony) as an audio data compression process, that was specified as a further development of MPEG-2 Multichannel in the MPEG-2 standard.

It's also a further development of MPEG-2 audio. This format is equally suitable for encoding general audio information and not especially optimized for certain types of audio material. As with video material, the audio format should be considered for playback later.

AAC audio can be encoded with a sample rate of 8,000, 16,000, 24,000, 32,000 or 48,000 Hz and in mono and stereo sound, respectively. By default, the sound is set to 48,000 Hz stereo. The higher the sample rate is, the larger the resulting file and higher the audio quality.

The advanced AAC audio [menu](#) includes the following settings options:

- The **bit rate** can be set between 6 and 512 kbit/s. 160 kbits/s is active by default. The higher the value is, the larger the resulting file and higher the audio quality. After a certain limit, additional improvements to audio quality will not be perceived. Bit rates under 64 kb/s are not recommended.
- As an **MPEG version**, set MPEG-4 or the older, proven MPEG-2 format.
- For the **File Header Type**, choose either RAW or ADTS. The "Header" indicates an explanatory head for the beginning of the file segment, which in fact takes up extra space, but is required for decoding under circumstances.
  - **RAW** indicates material which does not include a file header in audio format. The audio material is therefore transferred directly without any special additional information (raw).
  - This requires that decoding routines are able to process the material without the explanatory file header. Especially in case "exotic" sample rates are set, this can lead to problems during RAW encoding.
  - **ADTS** indicates a file header type which contains information for encoded audio material. In case of doubt, select this file header type, since fewer problems can be expected in this case.

## Object type

: This provides selection between "Main" and "Low complexity".

- **Low complexity**: Data is present in a form that hinders different decoding algorithms (noise replacement), but enables others (temporal adjustment noise formation).
- **Main**: This sets other focuses in the encoding, and other decoder algorithms can be used.

**Note**: For example, Apple iPod requires "low complexity encoding". However, you don't need to worry if you select the right preset for Apple iPod in the export [dialog](#)

# Multiplexer

The multiplexer is a component of the encoder which combines [audio](#) and video streams.

In this section:

[Output format](#)

[ISMA compatible](#)

[For Sony PSP](#)

[For iPod](#)

[Live mode \(get times from samples\)](#)

## Output format

[MPEG-4 file](#)

: This is an MPEG standard (ISO/IEC-14496) with the original goal of supporting devices with less computing performance. Currently, MPEG-4 has reached a wide bandwidth of application, from HD video to support for mobile telephones.

**JPEG2000 file:** DCI (**D**igital **C**inema **I**nitiative) has been replaced by the JPEG2000 format for encoding movies. The current distribution and presentation of films has been taken over by digital projectors that play back **high-resolution Mj2 streams** in outstanding [image](#) and sound quality.

**3GPP file:** A standard supported by plenty GSM and UMTS mobile telephones. 3GPP is very similar to the MPEG-4 standard, but also supports formats that are not permitted by [MPEG](#)-4.

## ISMA compatible

The "Internet Streaming Media Alliance" combines video codec standards (e.g. [MPEG](#)) and continuous transfer within computer networks (e.g. RTP **R**eal-time **T**ransport **P**rotocol) to ensure that videos available online can be correctly transferred and played back.

**Note:** This option can only be activated, if under "Format" the entry "[MPEG](#)-4 file" has been selected.

## For Sony PSP

Switch on this option if the video should be played back with the Sony PSP.

**Note:** This option can only be activated, if under "Format" the entry "[MPEG](#)-4 file" has been selected.

## For iPod

Switch on this option, if the video should be played back with the Apple iPod.

**Note:** This option can only be activated, if under "Format" the entry "[MPEG](#)-4 file" has been selected.

## Live mode (get times from samples)

This option is only important for live transfers and is therefore not required in MAGIX [Movie](#) Edit Pro 16.



# Appendix: MPEG Encoder Settings

In this chapter

[General settings](#)

[Video settings](#)

[Advanced video settings](#)

[Audio settings](#)

# General settings

## [MPEG type](#):

Set the output type of the created MPEG file. You can adjust the encoder settings freely (to export your video in the corresponding format, for instance) for further use in other programs or on your own website.

If you open the encoder from a burn [dialog](#), or intend to use the exported material for VCDs, SVCDs or DVDs, then select the corresponding option. This will adjust the settings of the encoder according to the standards required for the corresponding discs to be played in a [compatible](#) player.

**Video format:** Automatically specifies the video format, aspect ratio, and [frame](#) rate (see [video settings](#) ). You can choose between PAL or NTSC.

**Interlace mode:** The [movie](#) is encoded interlaced (i.e. in two half-screens, so-called fields). This is essential for later playback on TV screens. If you want to view the exported movie on your PC only and like a "cinemascope" view, you can also encode by frame (progressively). Some video projectors also support playback of progressively encoded [image](#) material. See [Interlace](#)

## **Bit rate:**

The bit rate determines the memory requirement by the completed video. The amount of data available can be used differently for different display modes. 20 MB can be 4 seconds of DVD video, or 5 minutes of Internet streaming at the thumbnail size. The quality of an MPEG video is measured by the width of the created data stream, i.e. the bit rate. This is the amount of transmitted data per time unit and is indicated in kBit/s or bit per second.

**Quality:** Determines the quality of the encoding process, or the quality of the [movement](#) to be more precise. The higher the quality, the better the finished video will look, but encoding will take considerably longer. The preset value "10" is a good compromise between speed and quality.

**Smart Rendering:** Smart Rendering can considerably reduce the encoding/processing strain of MPEG files. The production of MPEG files re-encodes only those parts of the movie that were changed in the program (e.g. by video cleaning or effects). Please note: The MPEG files contained in the movie **must** have the same format, i.e. the bit rates (variable or constant), [audio](#) formats, image resolutions, and video formats must match.

## **Quick, GOP-precise copying:**

This special Smart Rendering mode enables MPEG material to be transferred without having to encode it for the target medium, thereby greatly increasing the encoding speed. The video material cannot appear to have been altered in any way; only hard cuts (without fades) are permitted. These won't be executed precisely to the frame, but will rather take place at the next GOP borders. For this reason, cuts should be set somewhat more generously.

To burn DVDs in original 5.1 Surround Sound (Dolby Digital Audio) without having to re-encode, this option has to be activated.

Allows you to rip the necessary settings from an existing [MPEG](#) file. This can be useful if you want to merge [MPEG](#) files together without re-rendering via Smart Rendering.

# Video settings

## Frame rate:

PAL requires 25 frames/sec, NTSC 29.97 frames/sec. Please note: encoding NTSC material as PAL or vice versa may be possible; however, it will result in jittery images.

**Aspect ratio:** Lets you set the [image](#) side or pixel ratio. With [MPEG](#)

2 the image format is displayed as image ratio; correspondingly there is 1:1 (square screen, not recommended), 4:3 (regular video) and 2.21:1 (cinemascope). This applies irrespectively of the selected video format.

With MPEG 1 the pixel format is specified instead. There is 1:1, CIR601 (corresponds to regular video) for 625 lines = PAL and 525 lines = NTSC and the same in 16:9. When selecting the output format Video CD the pixel format is automatically adjusted to the selected video format. Use with caution, even if you only want to export MPEG 1.

The option **Auto** is set as default. Here you can adjust the [Movie settings](#) accordingly.

**Resolution:** Width and height of the video corresponds with the settings in the export [dialog](#)

**GOP structure:** Here you can change the settings of the [GOP](#)

sequence, i.e. the number of P frames per I frame within a GOP. Please note that the total length of the GOP must not exceed 15 frames, which corresponds to the default setting (1 I frame + 4 P frames + 5\*2 B frames = 15 frames).

However, you can reduce the length of the GOP sequence (while compromising the image quality at the same bit rate). This speeds up the encoding process considerably as the motion estimation while encoding P and B frames requires high [CPU](#) performance. The speed of decoding, i.e. playback, is also increased.

If I frame is set to 1, each frame is an I frame. If the value is set larger, the setting describes the total length of the GOP.

**Auto GOP:** Closed GOPs do not contain relations to frames from subsequent GOPs. MPEGs where all GOPs are closed, make MPEG editing easier as the I frames only can be edited alone if the GOP is closed. Auto GOP closes GOPs at [scene](#) changes, whereby two different and complex procedures ("fast" and "VSCD") are used.

## **Bit rate mode**

In "constant bit rate" mode a bit rate that constantly remains the same is used. This option should be used for Video CDs, as it is only required here. With a constant bit rate the full power of MPEG compression can not be used properly as bandwidth for non-moving scenes is lost.

"Variable bit rate" mode attempts to adjust the available storage space to the requirements of the video you want to encode. The actual bit rate fluctuates around a mean value. During calm sections of the video it may drop to a minimum value, if there are movements in the [scene](#) it may rise to the maximum value. There are two different regulation processes (mode 1 and mode 128).

# Advanced video settings

**MPEG profile and level:** The MPEG-2 standard defines so-called "profiles" and "levels". For creating SVCDs and DVDs you can use "Main profile and Main level". The high profile adds additional properties to the data stream like the option to display an [image](#) at a reduced resolution for restricted transmission quality (SNR-scalable profile), or locally scaled, for instance an [HDTV](#) data stream on a standard TV set. The 4:2:2 profile is used if the image data is to be encoded for alternative chroma scanning. However, these profiles are supported by very few encoders, and mainly only for professional use.

These levels define the restrictions to the image resolution and the maximum data rate. Low level can only reach a reduced resolution (352x288 = CIF); high level, or High 1440, enables encoding in HDTV format.

Estimate movement: These parameters are controlled via the quality controller (see General Settings).

## Other

### Noise sensitivity:

This factor defines how sensitive the encoder will react to noise in the source material. If the source material only contains a little noise (digital recordings, computer animations, or material already de-noised by video cleaning), then you don't have to change the default value 4, or you can even reduce to increase the quality further. However, if you want to encode noisy material, then too low of a factor will considerably increase the encoding time at the cost of quality. For an unedited analog video you can increase the factor to 8-14.

### Noise reduction

(click on noise sensitivity): A noise filter is used with adjustable settings from 1-31.

## Advanced parameters

Additional expert settings are available in the tree to the right of the window. These should only be changed by experienced users. They have been optimized for general applications to such an extent that changes are only necessary in exceptional cases.

# Audio settings

**Audio Type:** You can use [MPEG](#) -1/-2, PCM ([WAV](#)), or Dolby® Digital. You can also select "No audio" in the export [dialog](#)

## Sample rate:

You can set a sample rate of 32, 44.1 or 48 kHz for the audio track. VCDs and SVCDs require 44.1 kHz, DVDs require 48 kHz. To reduce the size of audio data it is recommended to lower the bit rate instead of the sample rate.

**Mode:** You can use mono, stereo, joint stereo, or dual channel. If audio type "Dolby® Digital" is used, then "5.1 Surround" mode may also be selected.

- Dual channel enables encoding of two mono tracks (e.g. different language sound tracks) that can be switched during playback.
- Joint stereo is an optimized stereo encoder which takes advantage of the fact that the signal of both stereo channels is largely identical. Use joint stereo if you can only use small audio bit rates, but still require a stereo signal.
- 5.1 Surround is available only for surround projects for burning DVDs. During this process, all 6 surround channels in the audio stream are encoded.

**Note!** For Surround projects "Dolby®

Digital" should be selected under "Audio type", and "5.1 Surround" under "Mode".

## Bit rate:

Here you can set the audio signal bit rate. The higher the bit rate, the better the playback quality. VCD

requires 224 kBit/s, and for SVCDs and DVDs select a value between 384 kBit/s and 448 kBit/s.

## Dolby® Digital Details

### Hint:

These functions are available only in the "5.1 Surround" mode.

### Dialog normalization:

Set the dB level of spoken dialog. This value will be used to adjust the total volume of DVD movies and different programs that can be received by the DVB. To do this, you must first measure the volume of spoken dialogs in your movies. The values 1-31 correspond to volume levels of -1 to -31 dB.

**Hint:** Use the mixer's peakmeter to set the volume level. This process produces only approximate results, because the exact measurement requires a mean value and this cannot be easily measured with MAGIX [Movie](#)

Edit Pro 16.

The displayed value serves also as a reference value for "Dynamic Range Control". Some areas are softer so that speech can be made louder, and louder areas will be made softer to avoid overmodulations.

### Background:

Action-filled movies have larger volume differences between spoken dialogs and loud scenes (during explosions, for example). Because of this dialogs are softer than in quieter films which can be modulated higher.

### Surround mix level / Center mix level:

These settings lead to an additional damping of the surround channels and the central channel. Usually both settings are set to -3 dB.

### LFE channel: Switch off the LFE channel (Low Frequency E

ffect), e.g. if you want to eliminate undesirable rumbling sounds in the low frequency range. Normally, you should leave this option activated.

**LFE filter:** The LFE filter is a low pass filter, which lets through only the lowest frequencies. If you are dubbing a [project](#)

in Samplitude/Sequoia, and have applied the LFE filter, you can switch off this function here, since this filtering has already been accomplished.

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# MPEG glossary

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[Bit rate](#)

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[Quantization scaling](#)



# Motion estimation

Motion estimation is a further element for reducing data used in [MPEG](#) encoding.

Motion estimation also occurs in the B and P frames. The [image](#) difference that still exist after [prediction](#) are examined. Complex algorithms are used to search for an original occurrence of the macro block in the reference [frame](#)

of each macro block of the P or B frame (these are units of 2x2 blocks specially combined for this purpose), which have been moved either by movement or by camera pan. They can then be left out in the P and B frame. Only the information by how far and to where the macro block has been moved is saved instead. This vector is called the motion detector.

In the [General encoder settings](#)

, you can specify the quality of the final MPEG video. This factor also influences the time required for encoding. The longer it takes, the better the quality.

# Bit rate

[MPEG](#) is a format used for storage and transferring. With older formats (e.g. [AVI](#)) you could predict that 20 seconds of [movie](#)

would result in 20 MB of data. The file size is this a direct measurement of quality.

This is different for MPEG: The amount of data available can be used differently for different display modes. 20 MB can be 4 seconds of DVD Video or 5 minutes Internet streaming in thumbnail format.

The quality of an MPEG video is measured by the width of the created data stream, the bit rate. This is the amount of the transmitted data per time unit; it is stated in kBit/s or bit per second.

Bits, not bytes are used, since the data word width has to address the transmission restrictions.

The file size can be calculated from the average bit rate, if its length is known:

$$F = (BRV + BRA) * t$$

F=File size      BRV=              BRA=              t=Length in s  
Video bit rate      [Audio](#)  
bit rate

# Block

For almost all [image](#) file editing techniques the image is subdivided into 8 x 8 pixel blocks (image points). This should be noted if you would like to use user-defined [image](#) resolutions (width/height), and they should always be a multiple of 8.

# Chroma format

The color value of each [image](#) point consists of the color values for the primary colors red, green, and blue (RGB), and for traditional and technical reasons it is transformed into one brightness value ( $Y = 0.299 * R + 0.587 * G + 0.114 * B$ ) and two color difference values ( $U = R - Y$ ,  $V = G - Y$ ).

The Y value alone produces the black and white picture. These signal components allow brightness and color information to be handled separately. The first data reduction occurs when single rows comprising a picture are read. Because the human eye has a lower color resolution than a brightness resolution, the color components are recorded only for every other point of a row (4:2:2) for each four pixels grouped (4:1:0), i.e. color signal under-reading.

## 4:2:2

This corresponds to the established TV standard. One piece of color information is transmitted per row for two pixels which corresponds to a 2/3 compression of the output data.

## 4:1:0

This is the color coding used for DVDs and most other consumer video applications. For each 4 pixels grouped together on two rows, one unit of color information is saved. This corresponds to an output data compression of 1/2.

# Field

A half-[image](#), i.e. two halves which combine to produce a [frame](#) (see [de-interlacing](#)).

# Frame

A [frame](#) is a single [image](#) from a video sequence which is also called a full image. PAL video, for example, contains 25 frames per second, NTSC 29.97 frames.

Video recordings, with the exception of computer animations and still frames, don't contain full images. Instead, they have double numbers of half-images (fields) which are transmitted in an interlaced state. However, we still refer to frames, since many predecessors of [MPEG](#) compression are based on such frames. Video editing literature usually refers to frames.

# GOP

## Group of P

ictures: The sequence of I frames and the P and B frames that belong to them.

e.g. I B B P B B P B B I ...

(This GOP has a length of 9, with 2 P frames and 2 B frames)

I frames contain the entire [image](#) information of a [frame](#), while P and B have part of the information.

So-called [prediction](#)

and movement approximation are methods used for reduction.

The combination P B B is called a subgroup.

I frames must appear in regular intervals in the data stream for image and sound to be synchronized. Between the I frames only a limited count of P and B frames is allowed. This explains a few things: Since P and B frames contain only differential information, these differences will be larger with time, since more and more changes takes place from frame to frame. A large count does not make much sense, since GOP has a maximum length of 15 (4P, 2B) in PAL and 18 (5P, 2B) in NTSC. (More than 2 B frames between P frames is not allowed).

In a **closed GOP**, B frames of the last subgroup may contain only backward predictions or references to the preceding P frame, but no references to the following I [frame](#), since it belongs to the next GOP.

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# Interlace

For historical reasons, pictures in a [movie](#) are always recorded and transmitted in the form of two fields; first the lines with even numbers and then those with odd numbers. These fields are alternatively displayed with double the [frame](#) rate. The (lazy) eye of the viewer or the processing of the TV tube puts the two frames together to form one.



The output [image](#)

First [field](#)

Second field

You normally don't have to worry about field processing. The video material goes through the entire processing chain as fields and is exported again as fields or burned onto DVD or shown on TV when played back on a DVD as a full picture. Only in certain rare conditions is it necessary to go deeper into this process. Two problems can occur:

## 1. Interlace artifacts

To be displayed on a computer monitor (during recording, in your TV/VCR, and in the arranger during editing), the two fields must be combined to form a full screen.

These two fields are not the same, since two fields are created during the recording between which a 1/50 of a second gap is evident. Moving objects can therefore produce artifacts on vertical edges.



Typical interlacing errors

You can use so-called de-interlacing to avoid this type of artifact. De-interlacing places a picture in between the two fields (interpolated). If you want to create stationary pictures from movies, then you should definitely use a de-interlace filter.

In the system settings ("File" [menu](#) -> [Program settings](#)) you can set the preview monitor display to use [hardware](#)

de-interlacing during video recordings for the video recorder and for display in the arranger.

## 2. Incorrect field rate

If you move around the series of fields in a movie data stream, then you will see strong jitter and flicker effects. Picture objects move in a backward movement ? two steps forwards, one back ? since a delayed field is shown before the previous one. This can happen in the processing chain if you export video material improperly with the wrong field order and then import it into different material. We use [MXV](#) or [MPEG](#)

"Top field first" format for all analog recordings ("odd" in other programs).

DV-[AVI](#)

on the other hand is saved with "Bottom Field First".

You can correct the field series for each video object in its object settings. See: "[Menu](#)

-> Effects -> Object properties"

# P frames and B frames

P frames save only the difference between the current picture and the preceding I [frame](#)

. The "P" comes from the term "prediction" which describes this process.

B frames save the differences between the current picture and the I or P frame preceding and following. This includes the information that was the same before and remained the same after the current frame.

Both directions are analyzed (indicates the "B" in the name, i.e. "bidirectional-predicted"). You can read more under [prediction](#)

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# Prediction

Prediction is a method of data reduction used by the [MPEG](#) format. The [image](#) elements already known from the previous or following frames are removed from the data stream.

## How does it work?

The encoder has a precisely defined GOP, for example IBBPBBPBB. This sequence is transmitted together with the encoder, which always knows exactly which kind of [frame](#) comes next. I, P, and B frames are differentiated.

Hint: When we talk about pictures, we mean frames of the video output, and I, P and B frames are the frames of the encoded video. Just as in movement approximation, blocks (8x8 pixels) are united into macroblocks (16x16 pixels) during prediction.

The first frame is always the I frame. It is completely encoded from the first picture. Afterwards, the 4th picture is analyzed for the creation of the first P frame. (As already said, the encoder, and later the decoder, will know that two B frames belong between them.) This image will also be completely encoded, and afterwards all macroblocks that haven't changed in comparison to the I frame will be deleted. They will be replaced by corresponding references for the decoder that tell it "you already know what should be shown here, and you can get it from the last I frame".

Now, the 2nd will be completely encoded, and all macroblocks identical to the first I frame **and** the following P frame will be removed. References to previous frames are called **backward predictions**, and references to following frames are called **forward predictions**

. The third picture will be edited in exactly the same fashion.

The fourth picture we have already explained, and now we need the next P frame, or picture number 7. Pictures 5 and 6 are B frames again, which are compared to P frames to both sides of them (picture 4 and 7); these are followed by the last two B frames. These have a special place, since in closed GOPs, they may contain only *backward predictions*

, and no references to the next I frame, because it belongs to the next GOP.

Something else: Since the decoder is no prophet, the P frames are always transmitted before the B frames! The GOP explained above will be encoded and transmitted in the order it is written.

Original      I<sub>0</sub> B<sub>01</sub> B<sub>02</sub> P<sub>01</sub> B<sub>11</sub> B<sub>12</sub> P<sub>02</sub> B<sub>21</sub> B<sub>22</sub><sub>11</sub>  
GOP

Data            I<sub>0</sub> P<sub>01</sub> B<sub>01</sub> B<sub>02</sub> P<sub>02</sub> B<sub>11</sub> B<sub>12</sub> B<sub>21</sub> B<sub>22</sub><sub>11</sub>    for closed GOPs  
stream            ...

                  I<sub>0</sub> P<sub>01</sub> B<sub>01</sub> B<sub>02</sub> P<sub>02</sub> B<sub>11</sub> B<sub>12</sub> I<sub>1</sub> B<sub>21</sub> B<sub>22</sub> P    For open GOPs  
                  <sub>11</sub>  
                  ...

Due to this nested structure, it is easy to see that during direct editing of MPEG material, complicated computations have to take place! These are made easier using a **frame table**

. A frame table contains a list, where the information of every frame in the data stream is found, identifying the type of frame it is.

Using [Movement prediction](#)

P and B frames are likewise reduced.

## Quantization scaling

The single pictures in [MPEG](#) are saved using a compression method comparable to JPEG with bitmaps and associated with quality loss. For this single images are divided into 8 x 8 [blocks](#)

. Each one of these blocks is then transformed into an 8 x 8 matrix (a table with rows and columns) using

a **DCT** (discrete cosine transformation) mathematical method. Each of these values is produced using all 64 individual pixels of the block, but the values in the matrix are ordered in such a way that the [image](#) information is ordered according to its importance.

This matrix will then be multiplied by another matrix, i.e. the **quantization matrix**

. Exactly how and why this matrix must be created is the biggest secret of encoder programmers, since this determines the quality of the whole encoding process. What is known is that the result should contain as many zeros as possible! These zeros correspond to the "unimportant" image elements mentioned and will not be transmitted in the data stream.

Depending on the encoder parameters regarding the target bit rate, fewer or more values of the matrix will be declared unimportant by dividing the quantization matrix by the **quantization scaling factor**

. Since only whole numbers are used, a division can produce a zero if the remainder is discarded.

This factor is also a direct measure of the sought [image](#)

quality of the MPEG data stream, since the "Q" in "Q" factor stands for quantization and quality.

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# If you still have questions...

In this chapter

[Task assistant](#)

[Online lexicon](#)

[Program help](#)

[PDF manual](#)

## Task assistant

The task assistant is your information center. It helps you complete your tasks and provides support at every step. Not only will you find clear videos with step-by-step instructions, but you'll also find quick access to a lot of functions.

The task assistant chapters can be found in the ["Tasks" menu](#)

## Online lexicon

In the D:Magazine from MAGIX we explain everything you ever needed to know about digital media. From Active-X to Zooming, it's all there.

You'll be able to find the lexicon at the following Internet address:

<http://site.magix.net/index.php?id=16113/>

# Program help

The program's help file contains hints on how to use the program and additional information. Many important terms are indicated in the text in italics and an explanation of them can be reached by clicking on them.

**Homepage:** The main help page can be accessed via the "Help -> Contents" [menu](#) point.

## Context help

: Press the "F1" key at any point in the opened program and help will open with the matching help topic (context help).

## Search function

: To find out information on specific words, use the search function. Enter either the individual word or use logical operators (OR, AND, NEAR) to refine your search if you have several search words.

- "OR" (between two words): All topics which contain both words or one of the words will be listed.
- "AND" (between two words): Only those topics will be listed which contain both words.
- "NEAR" (between two words): Only those topics will be listed which contain both words. A maximum of six other words may be added between the search terms.
- "NOT" (before a word): Topics which contain this word will **not** be listed.

**Print:** Use the help program's print function to make a printout of individual topics or entire sections. For help cases which may take a long time, this can be more practical than switching between the help window and the program. The print [button](#) is located at the top of the help window in the [toolbar](#)

# PDF manual

Much like the help feature, the electronic PDF manual contains the entire program documentation. You can find it under "Start -> Programs -> MAGIX [Movie](#)

Edit Pro 16" in the "Documentation" subfolder.

**Note:** To view the PDF file you will need "Foxit Reader" application; you can find it on the MAGIX [Movie](#)

Edit Pro 16 installation DVD.